



Horace Knight del. et lith.

West, Newman chromo.

INDIAN MOTHS.

## THE MOTHS OF INDIA.

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Plate G. will appear in a subsequent number.

Eds.

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# THE MOTHS OF INDIA

## EXPLANATION OF PLATE F.

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## THE MOTHS OF INDIA.

SUPPLEMENTARY PAPER TO THE VOLUMES IN  
"THE FAUNA OF BRITISH INDIA."  
SERIES IV, PART I.

By

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(With Plates F. and G.)

## BOMBYCIDÆ.

The genera *Bombyx* and *Mustilia* have the frenulum aborted and minute, the other genera have it fully developed.

41. GUNDA *Silkima* insert, No. 43, *Bombyx* LUGUBRIS which has precedence.

45a. MUSTILIA PHÆOPERA, n. sp. (Plate F., f. 1).

Head, thorax and abdomen rufous, the shaft of antennæ and a band between their basis white. Forewing rufous with a greyish tinge, the apical area from middle of costa to termen at vein 3 chocolate brown tinged with grey towards costa; antemedial line brown, excurved below costa and oblique below submedian fold; a rather diffused medial line excurved in cell and below submedian fold; postmedial line excurved below costa, then waved, incurved to vein 2, then excurved; cilia pale yellow. Hindwing pale greyish rufous, the terminal area broadly chocolate brown from vein 6 to tornus; two oblique minutely waved lines from middle of costa to tornus; cilia pale yellow; the underside greyish with the costal area suffused with rufous; two obliquely curved postmedial brown lines.

*Habitat.*—ASSAM, Khâsis (Badgley). *Exp.* ♂ 54, ♀ 70 mill. Type in B. M.

*Larva.*—Draws in its head when alarmed nearly to a level with its shoulders, its body wide and flattened at the shoulders, narrowing and cylindrical at extremity, the anterior segments protrusible; a horn on anal segment; 16 feet, naked, leathery brown, darker on dorsum with a dark olive spade-shaped patch towards extremity; lateral patches of yellow, the whole body dotted with green; five small grey patches dotted with black on back, two yellow lines on the neck and two yellow spots on the spade-shaped patch: the ventral surface with a yellow patch on each segment, legs pink; prolegs with bright yellow dot on outer side. Food plant: *Camellia caudata*.

*Cocoon.*—Strong, silky, dull brown, pointed at one end and truncate at the other (Badgley).

47a. ANDRACA ALBILUNATA, n. sp. (Plate F., f. 2).

Forewing with the termen strongly excised below apex, angled outwards at vein 4, then strongly crenulate; hindwing with the termen slightly excised below apex and strongly crenulate from vein 4 to tornus, the inner margin not excised.

Head, thorax and abdomen dark red-brown mixed with grey, the tarsi with the

terminal joint blackish. Forewing dark red-brown mixed with grey; a deeper red-brown antemedial band defined by greyish on inner side and with slightly waved edges, oblique from costa to submedian fold; an indistinct brown discoidal bar with grey line in centre; a waved brownish medial line and waved grey postmedial line with somewhat deeper brown band between them; small obliquely placed subapical white lunules below veins 7 and 6 with a reddish tinge beyond them. Hindwing red-brown with a greyish tinge; a small brown discoidal spot and chocolate brown spots on inner margin before and beyond middle with greyish marks beyond them; cilia with whitish tips in the indentations, underside of forewing chocolate brown, the costa grey to postmedial line with brown spot beyond middle; hindwing grey with brown discoidal spot, two waved brown postmedial lines with the area between them tinged with red-brown and a diffused red-brown patch at tornus.

*Habitat*.—ASSAM, Khásis (Badgley). *Exp.* ♂ 40, ♀ 46 mill. Type in B. M.

*Larva*.—Turns its head down and humps its shoulders in repose; gregarious, long, cylindrical; pairs of horns on 3rd and 5th somites and a single horn on anal somite; 16 feet; pubescent; dull black dusted with grey; dorsal line pale yellow; subdorsal and lateral lines orange; two ventral yellow lines; broad yellow patches between the prolegs; head black; horns dusky with orange bases and whitish at tips. Food plant: *Cudranus javanicus*.

*Cocoon*.—Strong, silky, blunt in front, pointed behind with long ligaments at each end and a hollowed out boat-shaped projection on dorsum (Badgley).

#### EUPTEROTIDÆ.

65a. APONA KHASIANA, Swinh., A. M. N. H. (7), xx, p. 75 (1907).

Head, thorax and abdomen rufous; antennæ with the shaft white, the branches brown. Forewing pale rufous, the basal area, the area beyond the medial line and the terminal area rather deeper rufous; an obliquely curved antemedial line with a faint line beyond it, somewhat angled outwards below costa and bent outwards below submedian fold a black discoidal point; a nearly straight and somewhat oblique medial line followed by a waved line; two waved postmedial lines; an incurved subterminal line followed by an indistinct line with greyish patches beyond it at apex and middle, excurved to vein 6, incurved at middle, then waved. Hindwing pale rufous, the basal inner area and terminal area rather deeper rufous; a diffused oblique rufous antemedial band, two oblique waved medial lines and a minutely waved postmedial line; the underside with the lines more distinct, the antemedial line double, three waved lines on medial area, the postmedial line excurved to vein 5 and with maculate band beyond it except at middle.

*Habitat*.—ASSAM, Khásis. *Exp.* ♂ 98, ♀ 110 mill.

70. EUPTEROTE MOLLIFERA, insert (syn.) *Eupterote pulchra*, Swinh., A. M. N. H. (7), XVIII, p. 404 (1906).

86a. SANGATISSA ARCTIADES, n. sp. (Plate F., f. 30).

Antennæ of both sexes bipectinate with moderate branches.

Head and thorax fulvous ; antennæ with the shaft whitish, the branches brown ; pectus, legs, and abdomen greyish tinged with fulvous. Forewing pale cinnamon brown, the veins, discal and submedian folds streaked with white. Hindwing white tinged with brown, thinly scaled.

*Habitat*.—ASSAM, Khâsis (Badgley). *Exp.* 36-46 mill. Type in B. M.

*Larva*.—Feeds at night and rests during day in a company on underside of leaf, the head and tail curved under in repose ; cylindrical ; hair soft, thick with scattered long hairs ; dull brown with the long hairs grey ; ventral surface dull red ; head black. Food plant : *Vitisadnata*.

*Cocoon*.—Silken mixed with hairs, slight, oval, in a cluster, grey-brown.

*Pupa*.—Short, blunt at both ends, a tuft of fine hooks at tail by which it is fastened to cocoon ; shining bright brown. (Badgley).

### SPHINGIDÆ.

#### ACHERONTIANÆ.

#### Genus PENTATEUCHA.

#### *Type.*

*Pentateucha*, Swinh., A. M. N. H. (8), 1, p. 61 (1908)..... *curiosa*.

Proboscis fully developed ; palpi upturned, slender, reaching about to middle of frons, the 2nd joint fringed with long hair in front, the 3rd short ; frons with tuft of hair ; antennæ of female ciliated ; thorax clothed with long rough spatulate hair ; tibiæ fringed with long hair, the hind tibiæ with two pairs of spurs, the fore tarsi with three large curved claws on 1st joint ; abdomen clothed with long rough hair ; frenulum present. Forewing with the apex rounded, the termen evenly curved, crenulate, vein 3 from well before angle of cell ; 5 from middle of discocellulars ; 6 from upper angle ; 7, 8, 9 stalked ; 10, 11 from cell. Hindwing with vein 3 from well before angle of cell ; 5 from well above angle ; 6, 7 from upper angle ; 8 approximated to 7 beyond the cell.

171a. PENTATEUCHA CURIOSA, Swinh., A. M. N. H. (8), 1, p. 62 (1908) (Plate F., f. 18).

♀. Head and thorax clothed with deep red-brown hair tipped with white ; pectus and legs rufous, the tarsi blackish ; abdomen blackish mixed with grey-white forming obscure segmental bands, the anal tuft and ventral surface rufous. Forewing clothed with dark red-brown hairy scales mixed with white, some rufous at base of inner area ; faint traces of a dark antemedial line ; an oblique elliptical white discoidal spot ; postmedial line with oblique dark bar from costa, then very indistinct, excurved to vein 3, then incurved ; sub-terminal line indistinct, double, oblique, waved, bent inwards to costa, where there is a white mark on it, a dentate line beyond it arising from apex, white and prominent from apex to vein 6, then indistinct and forming white points on the veins ; cilia rufous with whitish points at the veins. Hindwing bright rufous, the inner area whitish to near tornus, where there is a dark patch with whitish bar beyond it ; an indistinct diffused pale postmedial line ; cilia with some white scales at tips. Underside of both wings, rufous ; forewing with indistinct pale discoidal spot, obliquely curved postmedial band and

prominent dentate white band from apex to above vein 6 ; hindwing suffused with white to beyond middle and tornus, an oblique slightly waved medial rufous line and indistinct postmedial line bent outwards to just above tornus, the terminal area irrorated with whitish.

*Habitat*.—ASSAM, Khasis. *Exp.* 104 mill.

AMBULICINÆ.

91d. MARUMBA MICROTA, Hmps., Nov. Zool. xiv., p. 327 (1907). (Plate F., f. 11).

Fore tibia with long curved claw at extremity.

♂. Head and thorax red-brown, the head rather paler, except the palpi ; antennæ whitish ; abdomen red-brown. Forewing grey-brown suffused with purplish rufous and with slight dark irroration ; a black and rufous subbasal spot on vein 1 ; an oblique brown medial line diffused on outer side ; postmedial area somewhat greyer ; an indistinct slightly curved subterminal line with two conjoined red-brown spots on it at inner margin ; a small dark brown spot on termen below apex defined by a grey lunule on inner side and with a very indistinct triangular brown shade below it from termen to the subterminal line ; cilia dark brown. Hindwing purplish red-brown with indistinct darker shade on termen near tornus ; cilia dark brown with slight whitish tips towards tornus ; the underside rather redder with indistinct medial line and curved postmedial line.

*Habitat*.—MADRAS, Godavery District ; CEYLON, Kandy. *Exp.* 44 mill.

91e. MARUMBA POLIOTIS, Hmps., Nov. Zool., xiv., p. 327 (1907). (Plate F., f. 23).

Fore tibia with large curved claw at extremity.

♂. Head and thorax grey white, the head and tegulae tinged with rufous ; metathorax with two slight tufts of blackish scales ; tarsi ringed with black ; abdomen grey-white dorsally suffused with rufous except at base and with fine black dorsal line expanding into a small spot on penultimate segment. Forewing grey suffused with reddish brown and irrorated with black, the basal and terminal areas browner and the postmedial area whiter ; some blackish suffusion before the whitish antemedial line which is defined by blackish on outer side, oblique from costa to median nervure, angled inwards in submedian fold, then excurved and angled inwards to inner margin ; a dark medial line excurved from costa to median nervure, then incurved to near antemedial line ; a small pale rufous discoidal spot, slightly defined by blackish ; postmedial line dark, excurved from costa to vein 5, then incurved and sinuous ; subterminal line indistinctly double, excurved below costa, then oblique, dentate and with small somewhat dentate black marks on its outer edge, the mark below costa extending as a streak to termen and the mark at vein 4 larger ; slight black marks on termen at the extremities of the veins. Hindwing grey suffused with brown ; postmedial line excurved and indistinct from costa to vein 4, then incurved and with whitish patch beyond it in submedian interspace, ending at tornus ; the underside whitish irrorated with fuscous, the

postmedial line fine, a curved dentate subterminal line with slight brownish band beyond it becoming terminal below vein 4.

*Habitat.*—GANJAM. *Exp.* 54 mill.

MACROGLOSSINÆ.

1136. AMPELOPHAGA OBLIQUIFASCIA, n. sp. (Plate F., f. 13).

♀. Head and thorax grey slightly mixed with red-brown, the vertex of head and dorsum of thorax red-brown; palpi with white line on 1st joint at side, the 2nd joint red-brown at side; pectus ventrally orange-red; tibiæ and tarsi grey-white; abdomen grey with broad diffused dorsal deep red-brown bands, the ventral surface fiery red with segmental brown lines. Forewing purplish grey tinged in parts with red-brown; subbasal diffused red-brown marks in cell and on vein 1; three rather indistinct and diffused curved waved antemedial brown lines; a slight discoidal point; a rather broad black-brown band from middle of costa to termen at vein 4, expanding somewhat at costa and into a large triangular patch on termen extending almost to tornus; postmedial line slight and dentate from costa to the oblique band, then oblique more strongly dentate with some fulvous yellow on its outer side, with a waved line before it from vein 2 to inner margin and two waved lines beyond it from the band to inner margin; subterminal line double, brownish and slightly waved from costa to vein 5, indistinct except toward costa where it is filled in with yellowish; a wedge-shaped brown mark on termen below apex; cilia black-brown. Hindwing dark-brown tinged with red, the inner area greyish; cilia rufous, whitish at tips. Underside of forewing fiery red with the termen grey, some dark brown suffusion in and below cell, six indistinct waved lines on postmedial area, a pale yellow subapical lunule and two wedge-shaped postmedial marks below veins 3 and 2; hindwing fiery red, the inner area greyish, the terminal area brownish, three indistinct minutely waved red postmedial lines.

*Habitat.*—ASSAM, Khâsis (Badgley). *Exp.* 80 mill. Type in B.M.

*Larva.*—Tapering to head, the thoracic somites very protrusible; head small; green with pale dots; subdorsal line white shading off to oblique yellow lateral stripes tinged with pink above; spiracles small, pale brown; horn brown; purple; feet maroon with a yellow mark above each. Pupates in leaves spun together.

*Pupa.*—Long with two horns on head and three at tail, the posterior third of tail much smaller than the anterior part which forms a prominent ring; dark brown with paler marks (Badgley).

Genus LEPCHINA.

*Type.*

*Lepchina*, Oberth. Bull. Soc. Ent. Fr., 1904, p. 76.... *tridens*.

Differs from *Acosmeryx* in the eyes being small, overhung by lashes; the terminal segment of antennæ not filiform; the tibial spines shorter; the 1st segment of mid-tarsi without elongate spines. Forewing with the termen



produced to points at and below apex and excurved at middle. Hindwing with the termen sinuous.

116a. LEPCHINA TRIDENS, Öbuth. Bull. Soc. Ent. Fr. 1904, p. 76.

♂. Head and thorax violaceous grey; abdomen brown; ventral surface reddish. Forewing violaceous grey with velvety brown lines and patches; the basal area with three lines followed by a postmedial triangular patch touching a discoidal point with its inner edge and extending from costa to termen and inner margin; the apical area with some streaks and marks. Hindwing brown with darker medial and terminal shades. Underside ferruginous red; forewing with the basal half blackish, two greyish costal patches, a sinuous terminal violet grey patch on both wings with medial whitish mark on forewing; two double brown lines on hindwing with greyish costal patch beyond them.

*Habitat.*—SIKKIM. *Exp.* about 64 mill. This species is unknown to me.

181. MACROGLOSSA GYRANS.

*Larva.*—Velvety black with green and pink lateral stripes faintly striated with black; spiracular stripe interrupted, similar in colour; the spiracles pink with white centres; head glabrous, green or pale red; thoracic plate horny; horn black.

*Pupa.*—Ochreous with black spots at sides. 5. (W. H. Campbell.)

198. MACROGLOSSA RECTIFASCIA.

*Larva.*—Pale yellow with faint blue transverse lines; dorsal line very dark blue edged with pale blue from 3rd to anal somite; lateral line similar, arising from two large black spots on 2nd somite and terminating just before two large black spots on anal somite; below this is a series of black specks; a broad sublateral black band spotted with pale blue; head prominent, dull green; legs black; claspers spotted with black; horn pale blue with a black ring at base. Food plant: *Photinia Lindleyana*. 5. (W. H. Campbell.)

#### PERGESINÆ.

137e. RHAGASTIS LEUCOCRASPIS, n. sp. (Plate F., f. 25).

♀. Head grey; palpi whitish at sides; tegulæ and patagia chocolate brown with grey-white stripe on outer edge; vertex of thorax grey-brown; pectus and legs pale grey tinged with rufous; abdomen with the 1st three segments chocolate brown, the rest of dorsum greyish tinged with fulvous, the sides whitish, the ventral surface tinged with rufous. Forewing purplish grey suffused in parts with rufous; a subbasal rufous shade on costal area, the base of inner margin chocolate brown; two obliquely curved antemedial brown lines, widely separated at costa, approximated at vein 1 where they terminate; an oblique rufous shade from costa at antemedial line to medial line at vein 3; medial line double, waved, obliquely curved from costa to vein 2, then slightly excurved; postmedial line obliquely curved, dentate, at veins 4-3 produced to points and with slight fulvous marks on it; a triangular chocolate brown patch on costa just before apex, the faint waved subterminal line arising from it; the apex slightly tinged with white; cilia dark brown. Hindwing black-brown, the inner margin, terminal area in submedian interspace and termen

towards tornus whitish; cilia grey with a brown line through them. Under-side of forewing reddish fulvous, the disk fuscous, a fuscous striga from costa towards apex, subterminal line oblique from costa near apex to below vein 7, then dentate, the area beyond it grey; hindwing reddish fulvous, the inner area and termen greyish, an indistinct curved minutely waved postmedial line.

*Habitat.*—U.P. ASSAM, Dibrugarh (E. C. Ward). *Exp.* 96 mill. Type in B. M.

## NOTODONTIDÆ.

211 *b.* DUDUSA SYNOPLA, Swinh., A. M. N. H. (7), XIX, p. 205 (1907).

♀. Antennæ bipectinate with long branches, the apical part serrate.

Head and thorax rufous mixed with some ochreous scales; antennæ black; upper part of frons and vertex of head tinged with fuscous; thoracic crest with some long spatulate black scales; pectus and legs with fuscous mixed, the mid and hind tibiæ with small tufts of ochreous hair at extremity; tarsi blackish, fulvous at extremities; abdomen rufous and ochreous, with broad diffused lateral fuscous bands, the anal tuft with some spatulate black hairs. Forewing ochreous suffused with rufous and slightly irrorated with brown, the veins blackish; a black point below base of cell; an oblique blackish subbasal diffused line from costa to submedian fold, with ochreous bar beyond it from costa to costal nervure; antemedial line indistinct, dark, defined by ochreous on inner side, waved, angled outwards on median nervure, crossed by a faint diffused oblique dark fascia from submedian fold to above inner margin near base, a broad diffused oblique blackish fascia from costa beyond it to termen between vein 3 and submedian fold; postmedial line double filled in with ochreous, waved. oblique from vein 7 to submedian fold, then excurved, a silvery white wedge-shaped mark from its inner edge to beyond it below vein 4; a rather diffused dark subterminal line arising at vein 7, oblique to vein 4, excurved to vein 3, then somewhat oblique; a series of lunules before termen defined by blackish on inner side and with slight double lines on inner side cilia with a series of blackish lunules. Hindwing ochreous almost wholly suffused with fuscous leaving some ochreous at base of inner margin and at tornus; a terminal series of dark lunules; cilia pale rufous with series of blackish lunules; the underside ochreous tinged with rufous and slightly irrorated with fuscous, a black discoidal spot. curved waved postmedial line and subterminal series of black lunules.

*Habitat.*—ASSAM, Khâsis. *Exp.* 118 mill.

215 *a.* RACHIA NODYNA, Swinh., A. M. N. H. (7), XIX, p. 206 (1907).

♂. Head and thorax pale and dark brown; antennæ and tegulæ blackish; metathorax with blackish dorsal fascia; pectus and legs with fuscous mixed; abdomen fuscous brown, the sides pale towards base. Forewing purplish brown suffused with fuscous; antemedial line very indistinct, extremely oblique from costa to vein 2 well beyond middle, then very oblique and defined by a pale fascia above to vein 1 and angled outwards above inner margin; an oblique black streak above middle of inner margin; a slight pale streak

in lower end of cell ; a slight dark streak beyond the cell above vein 4 ; post-medial line very indistinct, angled outwards below costa, oblique to antemedial line at vein 2 where it is angled outwards, then oblique and represented by slight black striæ defined by ochreous on outer side ; a slight ochreous subterminal line, dentate and defined by black towards costa, below vein 4 very oblique and strongly defined by black on inner side ; a fine black terminal line. Hindwing white tinged with brown, the veins brown, the costal and inner areas suffused with brown ; a diffused brown subterminal line with whitish line on outer edge, the brown line faint to vein 3, then strong blackish and with small black lunule above it at vein 1 ; termen black brown ; a fine black terminal line ; cilia brown.

*Habitat*.—ASSAM, Khâsis. *Exp.* 76 mill.

220 a. PHALERA GONIOPHORA, n. sp.

Head and tegulæ reddish ochreous, the latter with whitish line near tips ; palpi, lower part of frons, antennæ and thorax rufous ; patagia silvery grey ; pectus and legs whitish mixed with brown, the tarsi banded with white ; abdomen with the basal half reddish ochreous, the terminal half brown banded with whitish, the ventral surface whitish. Forewing silvery grey suffused and irrorated with red-brown ; a waved subbasal line from costa to vein 1 ; antemedial line double, with dark points on the veins, somewhat incurved in submedian interspace ; three indistinct waved lines on medial area, with dark points on the veins ; apical patch yellowish white suffused with reddish ochreous except at margins and with three dark striæ from costa, ending at vein 5 and with its outer edge angled at veins 7 and 6, the double, nearly erect postmedial line arising from it and with a series of dark points beyond it ; subterminal line oblique from the apical patch to vein 2 and with some dark points beyond it ; a crenulate brown terminal line intersecting the cilia which are reddish ochreous. Hindwing red-brown tinged with greyish ; cilia yellowish white intersected with rufous. Underside whitish, the forewing suffused with brown except on apical area ; the hindwing with diffused brown medial band from costa to vein 2.

*Habitat*.—PUNJAB, Dehra Dun ; ASSAM, Khâsis (Badgley). *Exp.* 66 mill. Type in B. M.

*Larva*.—Gregarious ; cylindrical ; hairy, the hair growing in rings on each segment ; black with brown rings interrupted dorsally ; eight white dorsal and lateral lines, one ventral line and short lines between the feet ; hairs pale brown, nearly white at tips ; feet brown ; head large. Food plant : *Quercus serrata*. 7. 8. 10. (Badgley).

221c. PHALERA OCHROPIS, n. sp. (Plate F., f. 8).

Antennæ of male bipectinate, the apex serrate ; forewing with vein 5 from middle of discocellulars, 6 from upper angle.

♂. Head and thorax deep rufous mixed with some ochreous ; pectus, legs and abdomen pale ochreous. Forewing pale ochreous, thickly irrorated with deep rufous ; a strong black fascia below the cell from base to antemedial line ;

subbasal line represented by an oblique black striga from costa; antemedial line indistinct, diffused, double filled in with whitish and oblique from costa to median nervure, then black defined on inner side by whitish, oblique, dentate, a black streak beyond it in lower part of cell; reniform with whitish annulus above and below, interrupted at middle; postmedial line black defined by whitish on outer side, bent outwards below costa, then oblique, dentate, a black streak from it to subterminal line above vein 3, a shorter streak above vein 6 and slight streak above 7; subterminal line represented by a series of oblique whitish striæ defined on outer side by black from below costa to vein 2, angled inwards in discal fold; the terminal area with whitish patches below apex and at middle, a terminal series of blackish points; cilia rufous with whitish streaks. Hindwing ochreous white suffused with brown; cilia pale; the underside ochreous white, the costal area irrorated with rufous.

*Habitat.*—CEYLON, Haputale (Alston). *Exp.* 52 mill. Type in B. M.

237 b. PYDNA BRUNNEA, Swinh., A. M. N. H. (7), XIX, p. 206 (1907).

♂. Head and thorax ochreous mixed with dull red-brown; abdomen ochreous suffused with reddish brown, the extremity and ventral surface slightly irrorated with brown. Forewing ochreous suffused with dull red-brown except on costal area and below basal half of cell and irrorated with a few black scales; claviform represented by a slight blackish streak; a slight pale streak in lower end of cell before the small ochreous-defined discoidal spot; postmedial line with small blackish spot on costa, bent outwards below costa, then represented by a double series of points, oblique below vein 4, a diffused ochreous mark beyond it on costa and a diffused patch on tornal area; cilia fuscous brown. Hindwing uniform dark brown; the underside ochreous tinged with brown except on costal area, a black discoidal spot and rather diffused oblique post-medial line dentate towards costa.

*Habitat.*—ASSAM, Khâsis; CEYLON, Maskeliya. *Exp.* 60 mill.

260a. STAUROPOUS INCLUSA, n. sp.

Antennæ of male serrate and fasciculate, of female ciliated.

Head and thorax dark red-brown mixed with white; abdomen grey suffused with rufous. Forewing whitish irrorated with dark red-brown, the inner half of basal area and the terminal area suffused with red-brown; a brown streak below base of cell; subbasal line represented by an oblique brown striga from costa; antemedial line strong, brown, inwardly oblique from costa to median nervure, then nearly erect and slightly angled inwards on vein 1; a slight brown discoidal bar; postmedial line brown arising from costa just beyond antemedial line, oblique to vein 6, then inwardly oblique, dentate and joining the antimedial line at inner margin; an indistinct pale waved subterminal line with a dark mark before it on costa and lunulate patches from vein 3 to inner margin; a series of indistinct pale lunules just before termen. Hindwing greyish suffused with red-brown; an indistinct curved medial line; cilia whitish at tips.

*Habitat.*—ASSAM, Khâsis (Badgley). *Exp.* ♂ 48, ♀ 52 mill. Type in B. M.

*Larva*.—Gregarious ; cylindrical, with a small dorsal hump towards extremity, short scattered hairs ; yellow with black dorsal line ; two lateral lines ; stigmata ringed with black and with black striæ near them ; ventral surface black with broad yellow ventral stripe and yellow lines between the feet, which are black ; head large, red. Food plant : *Quercus griffithii*. 4. 5.

*Cocoon*.—On or underground ; strong pudding-dish shaped, formed of earth lined with silk.

*Pupa*.—Somewhat pointed at ends, short, red-brown with black spiracles (Badgley).

260 *b*. STAUROPUS DILUTA, n. sp.

Antennæ of male bipectinate with short fasciculate branches, of female ciliated.

Head, thorax and abdomen rufous mixed with grey. Forewing grey suffused and irrorated with rufous ; traces of a wavy subbasal line, oblique towards costa ; traces of a wavy antemedial line, double towards costa ; a slight whitish point on upper part of cell towards extremity ; postmedial line rufous, minutely dentate, bent outwards below costa, incurved at discal fold and strongly below vein 4, subterminal line indistinct, pale, defined by brownish suffusion on postmedial area, incurved between veins 7 and 4 and below vein 3 ; a series of brown striæ before termen defined on inner side by slight pale lunules ; a terminal series of slight brown striæ. Hindwing whitish suffused with red-brown ; cilia white at tips ; the underside whitish tinged with red-brown.

*Habitat*.—W. CHINA, Omei Shán ; ASSAM, Khásis (Badgley). *Exp.* 42-62 mill. Type in B. M.

*Larva*.—Solitary ; tapering to both ends ; bright green with a fine red line and white band at sides ; head white with black and red lines and yellow cheeks ; fore feet tipped with pink.

*Cocoon*.—An oval hollow below the ground with slight papery lining.

*Pupa*.—Purplish black, roughened, the extremity paler with slight anal projection. Food plant : *Ilex exsalca*. 7. (Badgley).

282 *b*. CHADISRA SEMIFEREA, n. sp. (Plate F., f. 35).

♀. Head and thorax grey mixed with rufous ; palpi black at sides ; tarsi black ringed with grey ; abdomen grey tinged with brown, the basal crest mixed with rufous. Forewing grey irrorated with rufous and fuscous, and with deep ferruginous suffusion from near base to middle except on inner obsolete on costal half, blackish from submedian fold to inner margin to area ; antemedial line obsolete on costal half, blackish from submedian fold to inner margin to which it is bent inwards ; a blackish medial line, rather oblique from costa to vein 2, then strongly bent inwards and erect to inner margin ; a deep rufous discoidal bar with some white above it and on outer edge ; postmedial line formed of black striæ slightly defined by white on outer side, oblique from costa to vein 6 and incurved below vein 2 ; a dark patch on postmedial part of costa with some whitish points on costa and two slight dark streaks above veins 7. 6. before the white subterminal line which is

incurved below costa and vein 2 and minutely dentate between those points, a series of small black spots defined by white on inner side before termen; a fine black terminal line. Hindwing grey suffused with brown, a rather darker terminal line; the underside rufous, the inner area pale.

*Habitat.*—CEYLON, Trincomali (Green). *Exp.* 50 mill. Type in B. M.

293b. NOTODONTA COLLARIS, Swinh., A. M. N. H. (7), XIV., p. 132 (1904).

♂. Palpi, frons, antennæ and thorax red-brown; vertex of head and telugæ white, the latter with black tips; tarsi with pale rings; abdomen red-brown with dark dorsal patch at extremity. Forewing pale, almost entirely suffused with red brown, leaving the submedian interspace and the area below costa towards apex paler; the costal area to beyond middle, the cell, and area from below end of cell to near termen below vein 4 and the terminal area below apex suffused with fuscous; a white point at base of median nervure; two fine brown streaks in basal half of submedian fold; traces of an irregular brown antimedial line; some dark points in end of cell and a slight discoidal bar; traces of an oblique dentate postmedial line; the apical half of terminal area with dark streaks in the interspaces and short oblique streaks below extremities of veins 4 and 3. Hindwing red-brown.

*Habitat.*—ASSAM, Khâsis. *Exp.* 48 mill.

#### ÆGERIADÆ.

Genus SPHECOTESIA, nov.

Type.—*S. pedunculata*.

Proboscis fully developed; palpi upturned, fringed with long hair in front at base, the 2nd joint reaching to about vertex of head, the 3rd moderate; antennæ of male minutely serrate and fasciculate, strongly dilated beyond middle; legs without tufts of hairs on the joints; abdomen strongly pedunculate at base and narrowing to extremity. Forewing with vein 2 present; 7·8 stalked. Hindwing with the discocellulars erect; veins 3·4 stalked.

362a. SPHECOTESIA PEDUNCULATA, n. sp. (Plate F., f. 14).

♂. Head and thorax dark brown mixed with rufous; palpi yellow suffused with rufous; frons with lateral white lines; basal joint of antennæ white in front; coxæ whitish; tibiæ with whitish bands at middle and extremity, the tarsi whitish at base; abdomen dark reddish brown with white segmental lines on the dilated part, the extremity rufous, the ventral surface with rufous segmental lines. Wings hyaline, the veins and margins dark brown.

*Habitat.*—SIKHIM (Bingham). *Exp.* 28 mill. Type in B. M.

367a. ÆGERIA CYANOPASTA, n. sp. (Pl. F., f. 20).

Antennæ with long cilia.

♂. Head, thorax and abdomen black irrorated with silvery blue scales; neck with orange ring. Forewing black shot with purple and irrorated with metallic blue green scales; an orange streak above inner margin before middle, a wedge-shaped patch in end of cell and an elliptical patch beyond the cell between veins 8 and 3 with slight dark streak on the veins. Hindwing hyaline, the veins and margins black-brown; an oblique discoidal bar. Underside of

forewing mostly orange to beyond middle, a patch beyond cell and maculate terminal band from apex to vein 2; hindwing with some orange scales on the veins.

*Habitat*.—QUETTA (Nurse). *Exp.* 26 mill.

368a. *ÆGERIA PYRODISCA*, n. sp. (Plate F., f. 26).

Antennæ of male strongly ciliated.

♂. Palpi orange, yellow in front and with a few black scales at sides; frons yellow, white at sides; antennæ black above, orange below; vertex of head and thorax blue-black mixed with some orange and with fine orange streak on dorsum and upper edge of patagia; pectus mostly yellow; legs red-brown banded with yellow; abdomen blue-black with narrow yellow segmental lines, the anal tuft red-brown and yellowish, the ventral surface with broader yellow bands. Forewing hyaline, the veins and margins narrowly brown with some yellowish scales; a slight fiery red mark near base; a narrow fiery red band on outer edge of the black discoidal line and a streak above vein 9; cilia brown. Hindwing hyaline, the veins and margins narrowly black; cilia brown.

♀. Antennæ fulvous above beyond middle; abdomen with the yellow bands broad at sides, the anal tuft with much more yellow, the ventral surface yellow with reddish orange bands.

*Habitat*.—BURMA, Maymyo (Barrow). *Exp.* ♂ 28, ♀ 32 mill. Type in B. M.

383b. *LEPIDOPODA ANDREPICLERA*, n. sp. (Plate F., ff. 15 ♂, 27 ♀).

♂. Head and thorax black-brown; palpi in front, sides of frons and neck white; pro- and metathorax, pectus, and legs with some whitish scales; hind tibiæ bluish silvery at base and with white medial band, the base of tarsus white; abdomen black suffused with brilliant blue. Forewing hyaline, a costal fascia, discoidal bar, veins, margins and a series of streaks in interspaces of terminal area, blue-black. Hindwing hyaline, the veins and margins black.

♀. Head and thorax with golden yellow replacing the white except at sides of frons; legs golden yellow; hind tibiæ with black band, the tarsus black except 1st joint. Forewing with the interspaces suffused with golden yellow, the discoidal bar yellow.

*Habitat*.—CEYLON, Kandy (Green). *Exp.* ♂ 28, ♀ 32 mill. Type in B. M.

#### Genus SCOLIOMIMA.

*Type*

*Scoliomima*, Butl., Trans. Ent. Soc., 1885, p. 371 ..... *insignis*.

Proboscis fully developed; palpi upturned, reaching vertex of head, the 1st and 2nd joints clothed with long rough hair, the 3rd moderate; antennæ of male bipectinate with short branches to apex; tibiæ clothed with long rough hair; mid tarsus with the 1st joint clothed with short hair, hind tarsus with it clothed with very long hair; abdomen clothed with rough hair towards extremity. Forewing with veins 2·3 from near angle of cell; 4·5 from above angle; 6 from below upper angle; 7·8 stalked; 9·10·11 from cell. Hindwing with vein 2 from before angle of cell; 3·5 from angle, 4 absent; 6 from

below upper angle becoming coincident with 5 before termen or separate ; 7 from angle.

395a. SCOLIOMIMA INSIGNIS, Butl., Trans. Ent. Soc. 1885, p. 371, pl. X., f. 10.

♂. Head, thorax and abdomen black, shot with bluish; palpi with the 2nd joint golden yellow; frons white at sides; tegulae golden yellow; metathorax with some fulvous hairs; mid tibiae with some bluish white hairs at base and on outer side at middle, and extremity; tarsi with the terminal joints yellow; abdomen with dorsal yellow band on 4th segment, narrowing at middle, some yellow hair in anal tuft ventrally. Forewing cupreous brown, the costal and inner margins black; a hyaline streak below base of cell. Hindwing cupreous brown; the inner margin and cilia towards tornus black with a greenish tinge; a hyaline streak below base of cell and a triangular patch on inner area from near base to termen.

The type from Borneo has a golden-yellow patch on metathorax and subdorsal yellow patches on 1st segment of abdomen; wings, darker.

*Habitat.*—MADRAS, Palni Hills (W. H. Campbell); BORNEO. *Exp.* 52-54 mill.

#### SYNTOMIDÆ.

442. SYNTOMIS PASSALIS.

*Larva.*—Fuscous black clothed with tufts of close downy hairs (W. H. Campbell).

#### ZYGÆNIDÆ.

#### CHALCOSIANÆ.

528a. SORITIA VIRIDIBASALIS, Dudgeon, J. Bomb. Soc., XVI, p. 399 (1905).

♂. Head and thorax fuscous brown; tegulae crimson; 1st joint of palpi and pectus yellowish white, abdomen pale blue, the first three segments fuscous brown, the ventral surface yellowish white. Forewing dark brown, the basal two-thirds suffused with green, the veins of terminal area defined by blue-green; a narrow oblique pale yellow postmedial band from costa above end of cell to tornus. Hindwing fuscous brown. Underside of forewing fuscous brown, the band broader with a curved pale blue subapical band beyond it; hindwing with the cell, a streak on each side of vein 1. c., and four subterminal lunules pale blue.

*Habitat.*—TENASSERIM, Daunat Range. *Exp.* 36 mill. This species is unknown to me.

557. *Heterusia drataraja* is the male of 571. CHALCOSIA DISTINCTA and insert (syn.) *Eterusia osseata*, Wlk., XXXI, 120 (1864).

590a. *Isbartia cyanescens* is the male of 591. ISBARTA BINGHAMI.

#### PSYCHIDÆ.

#### CECETICINÆ.

617a. CLANIA DESTRUCTOR, Dudgeon, J. Bomb. Soc., XVI, p. 401 (1905).

Forewing with veins 4·5 stalked to near termen, the veinlets between vein 1 and inner margin slight; hindwing with veins 4·5 strongly stalked; vein 8



anastomosing with the cell towards extremity, then again with vein 7, the veinlets between it and costa slight.

Head, thorax and abdomen reddish brown mixed with greyish and dark brown; tarsi whitish. Forewing red-brown mixed with greyish, the veins streaked with blackish; an elliptical whitish mark below veins 4·5 and a small triangular mark on termen below vein 7. Hindwing reddish brown mixed with greyish, the veins blackish.

*Habitat*.—SIKHM; BHUTAN; ASSAM, Chittagong; BORNEO, Kuching. *Exp.* 30 mill.

*Larva*.—Food plant: Tea, the larva case formed of twigs of the plant placed longitudinally.

618a. CLANIA MONOCHROMA, n. sp.

♂. Head, thorax and abdomen dark brown with some greyish hair; wings uniform dark brown. Forewing with three veinlets between vein 1 and inner margin. Hindwing with veins 4·5 stalked; 7 connected with 8 by an oblique bar near end of cell; 8 without veinlets to costa.

*Larva*.—Case covered with white silk to which are attached excreta and a few pieces of bark and twigs.

*Habitat*.—CEYLON, Kandy (Green). *Exp.* 32 mill. Type in B. M.

618 a. CLANIA ANTRAMI, n. sp.

♂. Forewing with veins 4·5 from cell; hindwing with vein 6 absent, 8 not sending branches to costa.

Head, thorax and abdomen greyish fuscous. Forewing ochreous thickly irrorated with fuscous, very thickly on terminal half. Hindwing fuscous brown, the inner area paler.

*Habitat*.—CACHAR, Kuttal (C. B. Antram). *Exp.* 24 mill. Type in B. M.

*Larva*.—Case covered with fragments of dry leaves; Food plant: Tea.

620 a. AMATISSA ALBITARSIA, n. sp.

♂. Fore tarsus with the terminal joint moderate; fore and hindwings with veins 4·5 stalked; uniform reddish brown; the fore tarsi whitish.

*Habitat*.—CEYLON, Hatiyantota (Green). *Exp.* 22 mill. Type in B. M.

#### CHALIANÆ.

633. MANATHA SCOTOPEPLA, n. sp.

♂. Forewing with veins 4·5 from cell, 11 connected at a point with 12. Uniform fuscous brown; the tarsi pure white.

*Habitat*.—CACHAR, Kuttal (C. B. Antram). *Exp.* 14 mill. Type in B. M.

*Larva*.—Case covered with scales of bark; Food plant; Tea.

644 a. MAHASENA TAPROBANA, n. sp.

Forewing with veins 8·9 very shortly stalked.

♂. Uniform red-brown with some greyish hair mixed.

*Habitat*.—CEYLON, Peradeniya (Green). *Exp.* 22 mill. Type in B. M.

*Larva*.—Case covered with short pieces of stick somewhat spirally attached.

645 b. MAHASENA THEIVORA, Dudgeon, J. Bomb. Soc., XVI, p. 400 (1905).

Fore and hindwings with veins 4·5 from a point.

♂. Uniform fuscous brown, the tarsi whitish.

*Habitat*.—SIKHHIM. *Exp.* 30-34 mill.

*Larva*.—Food plant: Tea, the larva-case formed of fragments and whole leaves attached to a rather soft case.

645 a. MAHAENA POLIOTRICHA, n. sp.

Forewing with veins 4·5 from angle of cell.

♂. Head and thorax clothed with long silky whitish grey hair mixed with some fuscous; abdomen fuscous, the ventral surface whitish grey; wings greyish fuscous, the cilia white.

*Habitat*.—PUNJAB, Kangra Valley, 4,500' (Dudgeon). *Exp.* 34 mill. Type in B.M.

*Larva*.—Case formed by short pieces of the stems of grasses arranged in a whorl with three or four twists. It has a Hymenopterous parasite of the genus *Chalcis*.

## ARBELIDÆ.

675 b. ARBELA CAMPBELLI, n. sp. (Pl. F., f. 7).

♂. Head, thorax and abdomen dark brown mixed with grey: antennæ with the branches rufous. Forewing grey thickly irrorated and striated with dark brown, the veins and submedian fold streaked with white; some white at base of inner margin; antemedial line formed of white striæ, from subcostal nervure to inner margin; two white discoidal striæ and a striga below extremity of cell; postmedial striæ between veins 6 and 3, and vein 2 and inner margin; a curved subterminal series of striæ placed somewhat in echelon: terminal oblique striæ from just above vein 3 to tornus; cilia white, tinged with brown at base and with dark line at middle. Hindwing white suffused and irrorated with brown; cilia brownish at base, white at tips; the underside white striated with brown forming ill-defined lines, a terminal series of small brown spots.

*Habitat*.—MADRAS, Horsleyhonda (Campbell). *Exp.* 36 mill.

The larva tunnels in the stem of *Ochna squarrosa* (W. H. Campbell).

676 b. ARBELA THEIVORA, n. sp. (Pl. G., f. 1).

♂. Head and thorax dark brown mixed with grey; abdomen fuscous mixed with grey, the basal crest blackish; pectus, legs and ventral surface of abdomen whiter. Forewing dark brown slightly irrorated with grey; the costal area, cell and vein 1 tinged with rufous; a faint blackish discoidal spot; the terminal area with faint dark striations. Hindwing fuscous brown slightly irrorated with grey, the cilia whitish at tips.

♀. Much greyer; forewing with numerous dark reticulate striations.

*Habitat*.—ASSAM, Sylhet, Gazipur (Antram). *Exp.* ♂ 18, ♀ 22 mill. Type in B. M.

*Larva*.—Bores in the bark of Tea and the smaller branches of the Mango, feeding under a web.

676 c. ARBELA MINIMA, n. sp. (Pl. F., f. 24).

♂. Head and thorax red-brown mixed with some white; pectus and legs mostly white; abdomen red-brown, the tuft of long hair on basal segment white with some spatulate brown scales, the ventral surface white. Forewing fulvous yellow very thickly irrorated with red-brown, the basal half and costal area with fulvous yellow spots defined by blackish; a round blackish discoidal spot with a fulvous yellow spot beyond it; cilia with a dark line through them and whitish patches above and below middle and at tornus. Hindwing golden brown; cilia white at tips, the inner margin fringed with long white hair.

*Habitat.*—CEYLON, Galle (Bainbrigge-Fletcher). *Exp.* 18 mill. Type in B.M.

## HEPIALIDÆ.

678 a. PALPIPHORUS PELLICIA, Swinh., A.M.N.H. (7), X, p. 152 (1905).

Head and thorax red-brown; abdomen fuscous brown. Forewing red-brown with slight greyish irroration; a white point with some dark scales round it in middle of cell and a smaller point rather nearer base below the cell; traces of oblique medial, postmedial and subterminal series of brown spots defined at sides by slight whitish striæ. Hindwing brown with a purplish tinge; a whitish patch on termen and cilia above middle.

*Habitat.*—ASSAM, Khâsis. *Exp.* ♂ 24, ♀ 28 mill.

## DREPANIDÆ.

732. DREPANA SPECULARIS, insert (syn) *Platypteryx obtruncata*, Warr., Nov. Zool., VII, p. 118 (1900). The locality Bahia is a mistake.

735. DREPANA SADANA, insert (syn) *Tridrepana adelpha*, Swinh., A.M.N.H. (7), XVI, p. 620..... Khâsis.

735. a. DREPANA RUBROMARGINATA, Leech, Trans. Ent. Soc., 1893, p. 365.

♂. Orange yellow. Forewing with indistinct somewhat diffused dark antemedial line from subcostal nervure to inner margin, strongly excurved below the cell; a small spot in middle of cell and discoidal spot; blackish spots below end of cell above veins 3·2; a slight oblique waved postmedial line from vein 7 to inner margin; the terminal area suffused with bright rufous obliquely from apex to postmedial line at lower angle of cell and thence to inner margin; a diffused lunulate band beyond the postmedial line from vein 5 to inner margin, somewhat incurved below vein 2; a diffused subterminal series of lunulate spots, the spot above vein 5 blackish. Hindwing with dark point at upper angle of cell and slight diffused medial line from cell to inner margin; diffused spots above bases of veins 3·2; a slight diffused waved postmedial line, excurved from costa to vein 3, then bent inward and a subterminal series of small lunulate spots from vein 6 to inner margin.

*Habitat.*—W. CHINA, Pu-tsu-fong; SIKHIM, TIBET, Yatong. *Exp.* 40 mill.

746. b. PHALACRA RUPA, n. sp. (Pl. F., f. 28).

♂. Head and thorax rufous slightly irrorated with grey, the vertex of head whitish; pectus and legs fuscous brown; abdomen rufous slightly banded with fuscous. Forewing rufous, the costal area suffused with grey and irrorated

ted with fuscous ; traces of an antemedial line angled on median nervure, then oblique ; two obliquely placed black discoidal points ; an indistinct dark, minutely waved postmedial line, slightly excurved below costa, then very oblique ; an indistinct subterminal line with yellowish marks on it, excurved from costa to vein 4, then oblique and slightly sinuous ; a series of slight black points before termen. Hindwing rufous ; the base yellowish ; an oblique subbasal greyish band defined by fine dark lines ; three oblique minutely waved medial lines ; a straight subterminal line from below apex to inner margin ; cilia grey at tips.

*Habitat.*—CEYLON, Maskeliya (Alston). *Exp.* 50 mill. Type in B.M.

146. *c.* PHALACRA TENERA, Swinh., *Trans. Ent. Soc.*, 1902, p. 592 (Pl. F., f 33).

♀. Head, thorax and abdomen brownish white mixed with brown. Forewing brownish white irrorated with brown, the medial area suffused with brown and bounded by minutely waved lines, on inner side obliquely curved, on outer incurved at discal fold and oblique below vein 4 ; a black point at lower angle of cell ; a minutely waved postmedial line with series of small black spots beyond it, oblique below vein 4 ; traces of a subterminal series of small pale lunules, incurved below vein 4 and with some fuscous before and beyond it towards tornus ; a fine black terminal line ; cilia chequered black and whitish. Hindwing suffused with rufous except basal area ; traces of two antemedial lines ; a black discoidal point ; an indistinct minutely waved medial line ; two waved fuscous postmedial lines ; traces of a greyish lunulate subterminal line ; a slight terminal line.

*Habitat.*—CEYLON, Kandy ; BORNEO, Pulo Laut. *Exp.* 26 mill.

#### THYRIDIDÆ.

764. STRIGLINA GLAREOLA, insert (syns) *Striglina conjuncta*, Swinh., A. M. N. H. (7), XVII, p. 381 (1906) and *Striglina mediofuscia*, Swinh., A. M. N. H. (7), XVII, p. 381 (1906).

766 *a.* RHODONEURA CANDIDALIS, Swinh., A. M. N. H. (7), XV., p. 504 (1905.)

♂. Head and thorax white, suffused with fuscous except behind ; tarsi banded with fuscous ; abdomen white. Forewing white, the costa and cell with numerous fuscous striæ and a few on basal, medial and postmedial areas ; postmedial line formed of a double series of striæ, oblique, slightly incurved to costa and below vein 4 ; a subterminal series of double obliquely placed striæ ; two black points just before termen below apex followed by an oblique series of striæ in the interspaces. Hindwing white ; a double subbasal line not reaching inner margin ; a double medial line formed of striæ meeting and terminating at vein 1 ; a double subterminal line starting from a single striga below costa, the outer line ending at vein 2, the inner at vein 1 ; some striæ on apical part of termen. Underside of forewing with some golden suffusion in basal half of cell, below costa to beyond middle, and between medial parts of postmedial and subterminal lines.

*Habitat*.—ASSAM, Silehar. *Exp.* 34 mill.

767 a. RHODONEURA ERUBESCENS, Warr., Nov. Zool., XV., p. 347 (1908).

♂. Head and thorax brown, the latter whitish behind; pectus and legs white suffused with brown and crimson, the tarsi brown ringed with white; abdomen white tinged with crimson. Wings white suffused in parts with brownish crimson and thickly reticulated with brown lines, the veins streaked with pale crimson on terminal half; the cilia pale crimson; forewing with blackish points on costa towards apex; hindwing with the basal area paler. Underside with the markings crimson; forewing with chestnut suffusion in and below end of cell and below costa towards apex, some black striæ in lower part of middle of cell, the veins beyond upper angle of cell streaked with black; hindwing with black striæ from costa.

*Habitat*.—ASSAM, Khâsis; BURMA, Shàn States, Maymyo. *Exp.* 38 mill.

777 a. RHODONEURA NOX, Druce, A. M. N. H. (7), I, p. 149 (1898).

♀. Black-brown slightly shot with purple; pectus brown mixed with ochreous white; legs brown, the tarsi ringed with white; ventral surface of abdomen ochreous. Forewing with faint dark reticulations; an indistinct oblique greyish line from costa near apex to middle of inner margin; cilia brownish at apex and above tornus. Hindwing with indistinct oblique greyish medial line; cilia whitish with a brown line through them. Underside of both wings mottled with ochreous except terminal area, the dark striæ forming numerous ill-defined lines; forewing with two dark spots on medial part of costa and two on median nervure.

*Habitat*.—BURMA, Tenasserim. *Exp.* 22 mill.

778. RHODONEURA *Nitens*, insert *Pyralis acutalis*, Wlk., XXXIV, 1523 (1865) which has precedence, and *Pharumbara fulvipicta*, Warr., Nov. Zool., XV, p. 343 (1908).

784. RHODONEURA ATRIPUNCTATIS insert (syns)

„ *mollicellalis*, Swinh., A. M. N. H. (7), XV, p. 504 (1905).

„ *turbatalis*, Swinh., A. M. N. H. (7), XV, p. 505 (1905).

*Brixia comparalis*, Warr., Nov. Zool., XV, p. 329 (1908).

The second is a variety with the basal half of both wings pale; a pale patch on inner area of forewing towards tornus; the apical area of hindwing pale to submedian fold.

786. RHODONEURA RETICULATA, Moore, 1888 (nec. Butl., 1886) will stand as:

*Rhodoneura moorei*, Warr., Nov. Zool., XV, p. 343 (1908).

786 a. RHODONEURA DISSIMULANS, del. *Banisia ordinario*, Warr., which is distinct.

786 c. RHODONEURA PLUMBEEA, Warr., Nov. Zool., XV, p. 344 (1908).

Head, thorax and abdomen red-brown with a silvery gloss; pectus, legs and ventral surface of abdomen pale rufous. Forewing red brown with a silvery gloss and numerous brown striæ; two fine well separated antemedial lines; postmedial line double, excurved beyond the cell; subterminal line forking; towards costa and tornus. Hindwing red-brown with a silvery gloss and

numerous brown striæ; a slight antemedial line, a double waved medial line and a subterminal line forking towards costa and tornus. Underside paler suffused with chestnut red; forewing with fine black and white streaks in and beyond upper part of cell.

*Habitat.*—SIKHHIM. *Exp.* 28-38 mill.

786 *d.* RHODONEURA TLENIATA, Warr., Nov. Zool., XV, p. 327 (1908).

Head, thorax and abdomen rufous with a whitish tinge. Forewing whitish tinged with rufous and with numerous red-brown striæ; a rufous subbasal band from costa to median nervure; an antemedial rufous band; medial band rufous, slightly angled outwards in cell and expanding at inner margin; post-medial band rufous, broad from costa to vein 5 where it is angled outwards, then narrower, incurved and expanding at inner margin; an oblique wedge-shaped band from costa towards apex to near termen at vein 5, enclosing a pale spot on costa; a patch on tornal area produced above to two points extending to vein 4; cilia deep rufous. Hindwing whitish suffused with rufous and with numerous red-brown striæ; an indistinct rufous medial band, forking above and ending in dark points at and beyond upper angle of cell; an indistinct subterminal rufous band from below costa to vein 5; cilia deep rufous. Underside similar.

*Habitat.*—SIKHHIM; ASSAM, Khâsis. *Exp.* 42 mill.

792. RHODONEURA FERROFUSA, trans. ad. 805. b HYPOLAMPUS after *H. atrostriatus*.

792 *c.* RHODONEURA RUINOSA, Warr., Nov. Zool. XV., p. 344 (1908).

♂. Head, thorax and abdomen whitish tinged with rufous, the vertex of head and extremity of abdomen paler. Forewing whitish, with numerous rufous striæ, the basal half suffused with rufous; indistinct curved antemedial, medial and postmedial narrow rufous bands, a rufous mark beyond the last below costa on the inner edge of a red-brown line which is excurved from below costa to tornus; an oblique narrow red-brown band across apical area. Hindwing whitish with numerous rufous striæ, the basal half suffused with rufous; fine red-brown medial and subterminal lines, the former evenly curved, the latter excurved, then bent outwards to termen above tornus. Underside of forewing with black points on costa and fine black and white streaks beyond upper angle of cell, a blackish patch at lower angle of cell with band from it to inner margin, the postmedial line and subapical band distinct; hindwing with irregular medial band except towards costa.

*Habitat.*—Sikhim. *Exp.* 30 mill.

792. *d.* RHODONEURA DISCOPIA, n. sp. (Pl. F., f. 19).

♀. Head, thorax and abdomen pale rufous. Forewing pale rufous with numerous lines formed of brown striæ, the more conspicuous being an antemedial line oblique from costa to median nervure, then erect, an oblique line from lower angle of cell to inner margin, and a postmedial line oblique to vein 4, then slightly incurved; a brown discoidal annulus. Hindwing pale rufous with numerous prominent reticulate lines formed of brown striæ: a small

brown discoidal annulus. Underside with the reticulate lines very distinct; forewing with rounded black-brown discoidal patch; hindwing with black-brown discoidal annulus.

*Habitat*.—CEYLON, Hapatale (Alston). *Exp.* 30 mill. Type in B. M.

793a. RHODONEURA FERRUGINOSA, Hmps., A. M. N. H. (7). XVII, p. 121 (1906).

♂. Bright ferruginous red. Forewing with numerous indistinct deep rufous striae; a rufous postmedial line, excurved from costa to vein 4, then incurved, with some deeper rufous suffusion before it; the striae on terminal area forming an ill-defined sinuous subterminal line. Hindwing with numerous deep rufous striae forming ill-defined lines. Underside with a slight silvery gloss, the striae rather more prominent.

*Habitat*.—SIKHIM, *Exp.* 30 mill.

793 b. RHODONEURA FALLAX, Warr. A. M. N. H. (6), XVIII, p. 229 (1896).

Head, thorax and abdomen dark violaceous grey tinged with brown; pectus, legs and ventral surface of abdomen whitish. Forewing dark violaceous grey, thickly and evenly striated with fine dark lines, some of the striae forming a slight rather oblique medial line, a slightly curved postmedial line and an oblique line across apical area; a slight brownish patch beyond discocellulars. Hindwing dark violaceous grey, thickly and evenly striated with fine dark lines, some of the striae forming an oblique line across apical area. Underside of forewing with metallic blue and black points in end of cell with some fine white streaks above them, some fine white and black streaks beyond upper angle of cell and an orange-red fascia below apical half of costa; hindwing whitish with the striae prominent, a forked rufous line from costa before apex to termen at vein 2.

ab. 1. Medial area of forewing and apical area of hindwing suffused with black above.

*Habitat*.—ASSAM, Khàsis; BALI; NEW GUINEA, *Fergusson I.* *Exp.* 22 mill.

797. RHODONEURA BRACTEATA, insert (syn.) 798. *Rhodoneura rufareta*.

797 a. RHODONEURA INTIMALIS, insert (syns).

*Rhodoneura canidentalis*, Swinh., A. M. N. H. (7), XVIII, p. 381 (1906).

*Microbelia fasciata*, Warr. Nov. Zool. XV., p. 341 (1908).

„ *privata*, Warr. Nov. Zool. XV., p. 341 (1908).

„ *uniformis* Warr. Nov. Zool. XV., p. 341 (1908).

*Rhodoneura giulia*, Swinh. A. M. N. H. (7) X. p. 50 (1902).

797b. RHODONEURA NEPHELOPERA, Hmps., A. M. N. H. (7). XVII p. 119 (1906).

Head, thorax and abdomen deep rufous; front of thorax and dorsum of abdomen with a purplish-silvery gloss; pectus, legs, and ventral surface of abdomen rather paler; wings rufous with a golden gloss, thickly and nearly evenly reticulate with pale and deep rufous lines. Forewing with the base, costal area, and area beyond the cell to apex and down to vein 3 deep rufous suffused with purple; cilia with two white patches at tips below apex and two

above tornus. Hindwing with the extreme base deep rufous; cilia with the tips chequered white and rufous. Underside of forewing with the subcostal nervure and base of veins beyond upper angle of cell finely streaked with black and white, the terminal area between veins 8 and 2 suffused with purple, with a curved white streak below extremity of vein 8.

*Habitat*.—ASSAM, KHÁSIS. *Exp.* 24 mill.

797 c. RHODONEURA LACTIGUTTATA, n. sp.

♂. Head and thorax white mixed with some rufous; fore tibiæ and the tarsi brown ringed with white; abdomen white with rufous segmental lines. Forewing white thickly reticulated with rufous; a brown-defined antemedial annulus in and below cell with a forked line from its outer edge to inner margin, and a streak from its upper edge to a small quadrate brown spot at upper angle of cell, giving off two lines to inner margin, the inner excurved, the outer angled outwards at vein 4, then incurved and forked towards inner margin, also a streak to apex intersected by an oblique line across apical area; the reticulations of terminal area forming small round spots. Hindwing white thickly reticulated with red-brown forming small round spots not forming definite lines; a dark brown point at upper angle of cell; cilia of both wings rufous. Underside of forewing with the costal area red-brown and with slight streaks of metallic and black scales in cell and on the veins below costa to apex.

*Habitat*.—BHUTAN, 3,000' (Dudgeon). *Exp.* 20 mill. Type in B. M.

800 b. RHODONEURA DORILUSALIS, Wlk., XIX, 890 (1859).

*Pyralis imbutalis*, Wlk., XXXIV; 1524 (1865).

*Siculodes acutipennis*, Pag., Naas. Jahrb. f. Naturif., XXXIX, p. 166 (1886).

Head, thorax and abdomen whitish mixed with red-brown. Forewing whitish tinged with rufous and striated with dark brown; traces of an oblique medial band; a more distinct postmedial band from costa to discal fold and lower angle of cell to inner margin; a curved subterminal series of striæ forking towards costa. Hindwing whitish tinged with rufous and striated with dark brown; an oblique postmedial band formed of dark striæ; a subterminal line formed of striæ and a spot at tornus. Underside of forewing with white subterminal band from below apex to vein 5.

*Habitat*.—NICOBARS, Nancowry; BORNEO: PULO LAUT; MYSOL; ARU. *Exp.* 26 mill.

800 c. RHODONEURA CUPRIZONA, n. sp.

♂. Head, thorax and abdomen greyish largely suffused with bright rufous. Forewing greyish white, the basal half of inner area with some rufous and silvery striæ; an oblique diffused cupreous red postmedial band bent inwards to costa confluent with a large diffused patch from apex and leaving a triangular whitish patch on costa beyond middle; a blackish discoidal lunule, a small spot beyond lower angle of cell and two points in discal fold; a subterminal series of slight blackish points; two slight subapical whitish lunules defined by blackish



on inner side. Hindwing whitish tinged with rufous, the basal area striated with rufous and silvery; an oblique rufous medial band with silvery striæ on its inner and outer sides; traces of a subterminal series of dark points and striæ; the underside with medial and subterminal rufous bands.

*Habitat*.—ASSAM, Khasis (Badgley). *Exp.* 36 mill. Type in B. M.

801 a. HYPOLAMPUS SUBUMBRATA, Warr., Nov. Zool., XII, p. 7 (1905).

♀. Head, thorax and abdomen pale rufous irrorated with a few glistening scales. Forewing pale rufous with a silky gloss and thickly striated with brown, some of the striæ forming indistinct antemedial, medial and double postmedial and subterminal lines. Hindwing pale rufous with a silky gloss and thickly striated with brown, the terminal half rather paler and with double curved postmedial and subterminal lines filled in with rather darker rufous; a slight waved line before termen. Underside of forewing with deeper rufous shade on costal half to beyond cell.

*Habitat*.—BURMA, Shan States, Maymyo. *Exp.* 36 mill.

802 a. HYPOLAMPUS SIMPLEX, Warr., Nov. Zool. XV, p. 337 (1908).

♀. Head, thorax and abdomen whitish tinged with rufous. Wings whitish suffused with pale pinkish rufous and faintly striated and irrorated with brown. Underside of forewing with blackish points on costa, black and opalescent streaks in, below and beyond the cell, the terminal area with blackish reticulations; an apical white patch with black point on it; hindwing with diffused dark medial band and blackish reticulations on terminal area.

*Habitat*.—BURMA, Shan States, Maymyo; BORNEO, Kuching. *Exp.* 20 mill.

805 b. HYPOLAMPUS OCELLIPENNIS, Warr., Nov. Zool., XV, p. 327 (1908).

Both wings with the termen excised below apex and strongly excurved at middle.

♂. Head, thorax and abdomen whitish suffused with rufous. Forewing rufous to well beyond middle leaving a series of small whitish spots on inner margin and a reticulate elliptical medial patch between the cell and vein 1, the outer edge of the rufous area angled at veins 5 and 2; terminal area yellowish white with red brown reticulations; an oblique rufous line from costa towards apex to termen at vein 5, then strongly incurved to a small spot just below vein 5 and bent outwards to a small spot at tornus. Hindwing yellowish white with red-brown reticulations; a medial rufous band with irregular edges; the reticulate lines of terminal area forming an oblique line across apical area and enclosing some elliptical spots on postmedial area. Underside similar.

*Habitat*.—LOWER BURMA. *Exp.* 38 mill.

805 c. HYPOLAMPUS LEPROTA, n. sp. (Plate F., f. 17).

♀. Head, thorax and abdomen ochreous white mixed with rufous. Forewing yellowish white thickly reticulated with rufous; the costal area suffused with rufous expanding into the cell before middle; a postmedial line angled outwards at veins 5 and 2 and incurved between those points, with a broad rufous band on its inner edge; a fine subterminal line arising from a triangular mark on costa, then oblique to a quadrate spot on termen at vein 5, then strongly

incurved and ending in a quadrate spot on termen above tornus. Hindwing yellowish white thickly reticulated with rufous; a small rufous spot at lower angle of cell conjoined to a spot on vein 2; the terminal area with stronger reticulate lines.

*Habitat*.—CEYLON, Madulsima (W. Vaughan). *Exp.* 24 mill. Type in B. M.

806. *HYPOLAMPUS SUBROSEALIS*, insert ab. *rubicunda*, Warr., Nov. Zool. XV., p. 336 (1908).

806 c. *HYPOLAMPUS ALBIPUNCTULA*, Warr., Nov. Zool., XV, p. 335 (1908).

♂. Head, thorax and abdomen whitish tinged with rufous; tarsi brown ringed with white. Forewing whitish suffused with rufous and with numerous rather indistinct brown striæ; two indistinct antemedial lines; an indistinct oblique brownish postmedial band with three white points beyond it above vein 6. Hindwing white with brown reticulations and slight rufous suffusion leaving numerous small round white spots; a black point in discal fold just beyond the cell and a postmedial point. Underside of both wings with blackish reticulations; forewing with minute black streaks in, below and beyond the cell with opalescent suffusion between them.

*Habitat*.—MANIPUR; LOWER BURMA. *Exp.* 24 mill.

#### Genus SYMPHLEPS.

*Symphleps*, Warr., Nov. Zool., IV., p. 383 (1897). Type *cochracea*.

Proboscis fully developed; palpi upturned, not reaching vertex of head; antennæ laminate; hind tibiæ with the inner medial spur very long, the outer minute. Forewing with vein 3 from before angle of cell; 5 from above angle; 6·7 from below upper angle; 8, 9, 10 stalked; 11 from cell. Hindwing with vein 3 from before angle of cell; 5 from above angle; 7 from upper angle, anastomosing with 8.

808b. *SYMPHLEPS OCHRACEA*, Pag., Nass. Jahrb. f. Naturf., XXXIX, p. 139 (1886).

*Rhodoneura alomosalis*, Hmps., P. Z. S., 1897, p. 621.

Head and thorax bright rufous; antennæ ringed with white; tarsi slightly ringed with white; abdomen paler rufous with slight whitish segmental lines; wings pale rufous thickly and evenly striated with deep rufous. Forewing with series of white points on costa; a slight white discoidal bar with some black scales at its lower extremity; cilia deep rufous with series of black points at base. Hindwing with series of black points at base of cilia. Underside of forewing with two small white discoidal spots ringed with black.

*Habitat*.—ASSAM, Khâsis; ANDAMANS; SINGAPORE; PULO LAUT; JAVA; AMBONIA; MYSOL; ARU; QUEENSLAND. *Exp.* 26 mill.

809a. *CAMADENA POLYSTACTA*, Hmps., P. Z. S., 1906, p. 494, Plate, 36, f. 7.

♂. Head and thorax dark-brown suffused with greyish; abdomen red-brown suffused with dark greyish brown. Forewing red-brown thickly striated with dark-brown, on terminal area forming numerous annulate spots;

the costal and inner areas suffused with dark-brown to the medial band ; two indistinct, somewhat irregular dark antemedial lines ; a broad oblique dark medial band before the indistinct postmedial line which is bent outwards below costa, excurved to vein 5, then oblique ; an indistinct subterminal line excurved from costa to vein 5, then oblique. Hindwing red-brown thickly striated with dark-brown, on terminal half forming numerous annulate spots ; a small black discoidal spot and slight medial line excurved between veins 5 and 2 ; the termen strongly excurved at middle.

*Habitat.*—SIKHHIM, Gantok. *Exp.* 32 mill.

## LIMACODIDÆ.

817a. SCAPELODES TANTULA, Swinh., A. M. N. H. (7), XIV., p. 132 (1904).

„ *dinawa*, Beth-Baker, Nov. Zool., XX, p. 382 (1904).

♂. Head and thorax grey mixed with fulvous, and fuscous ; palpi black at tips ; abdomen fulvous, dorsally mixed with fuscous except at base. Forewing fuscous thickly irrorated with grey, and tinged with fulvous on disk ; a diffused fulvous streak below base of cell ; cilia tinged with fulvous. Hindwing fuscous, the basal and inner areas and veins fulvous ; cilia fulvous mixed with fuscous.

*Habitat.*—ASSAM, Khàsis ; BRITISH NEW GUINEA, Dinawa. *Exp.* 42 mill.

823a. OXYPLAX FULVATA, n. sp. (Plate F., f. 16).

♂. Antennæ much thickened and flattened, simple ; metathorax with spreading crest of scales ; forewing with the inner margin lobed before middle and with tuft of scales.

Head and thorax fulvous mixed with some blackish ; abdomen fuscous. Forewing fulvous with a cupreous tinge and brown suffusion ; the basal area suffused with dark brown to the obliquely curved diffused medial line ; the terminal area suffused with black, broadly at costa and narrowing towards tornus ; cilia chequered fulvous and black and with black tips. Hindwing fuscous, cilia grey, fuscous at base and with fuscous line through them.

*Habitat.*—CEYLON, Maskeliya (Pole). *Exp.* 18 mill. Type in B. M.

835b. THOSEA FLAVICEPS, n. sp.

Male with the palpi extending about length of head, female about three times length of head.

Head and thorax yellow with slight rufous dorsal streak, the terminal half of thorax suffused with rufous ; pectus, legs and abdomen rufous slightly mixed with yellowish. Forewing deep rufous, the area beyond the post-medial line browner to submedian fold ; some silvery suffusion on median nervure and vein 1, on terminal half of costal area, and on terminal area : an indistinct very oblique brown postmedial line from costa just before apex to middle of submedian fold ; an indistinct somewhat oblique brown sub-terminal line. Hindwing red-brown with a slight pinkish tinge.

*Habitat.*—ASSAM, Khàsis (Badgley). *Exp.* ♂ 34, ♀ 40 mill. Type in B. M.

*Larva.*—With long pointed prominences bearing stinging hair ; solitary ; rolls itself up and drops when alarmed ; very dark maroon with fine red and

yellow lines ; sides green with yellow lines and a series of brown dots : ventral surface semi-transparent yellow. In the young larva the red and yellow markings on back are absent. Food plants: *Andromeda ovalifolia*, *Photinia eugenifolia* and *Camellia caudata*.

*Cocoon*.—Oval, slight, dark red-brown.

*Pupa*.—Short, rounded, light brown with paler rings on dorsum of abdomen, the shoulders shining (Badgley).

836a. NATADA FULVIDORSIA, n. sp. (Plate F., f. 9).

♂. Head and thorax fulvous, vertex of head, patagia on outer edge and at extremity with some black scales ; abdomen fuscous brown ; pectus, legs and ventral surface of abdomen pale fulvous. Forewing fuscous brown slightly tinged in parts with grey ; a few fulvous scales below costa and on medial area below the cell. Hindwing fuscous brown ; both wings with fine pale line at base.

*Habitat*.—CEYLON, Maskeliya (de Mowbray). *Exp.* 26 mill.

836b. NATADA FULVIMIXTA, n. sp. (Plate F., f. 21).

♂. Head and thorax dark brown mixed with pale fulvous ; antennae whitish ; abdomen fuscous brown ; pectus, legs and ventral surface of abdomen ochreous. Forewing dark brown slightly irrorated with greyish and faintly tinged with fulvous in parts : an oblique whitish line defined by black on inner side from just below apex to inner margin beyond middle. Hindwing fuscous brown ; both wings with fine pale line at base of cilia.

*Habitat*.—CEYLON, Paltipolla (Alston). *Exp.* 30 mill.

847a. TETRAPHLEPS FERREOGRISEA, n. sp. (Plate F., f. 10).

♂. Head, thorax and abdomen iron-grey mixed with black-brown especially at tips of tegulae and patagia. Forewing iron-grey irrorated with black-brown ; an oblique black subbasal line, arising below costa and bent outwards to inner margin, emitting a streak below the cell to the oblique sinuous black antemedial line ; a black discoidal lunule ; a brown shade from below end of cell to tornus ; an incurved black line from costa towards apex to termen at vein 2, and a black shade on terminal area from just below apex to vein 4 : cilia chequered grey and black-brown. Hindwing grey suffused with brown.

*Habitat*.—CEYLON, Mankulam (Mackwood). *Exp.* 24 mill. Type in B. M.

853a. MIRESA THERMISTIS, n. sp.

Forewing with vein 10 from well before end of cell.

Head and thorax bright rufous, the vertex of head and tegulae yellowish ; pectus and legs with some yellowish hair ; abdomen deep rufous with some yellowish hair at base and on ventral surface. Forewing bright rufous, the interspaces of discal area thinly scaled ; a diffused brownish patch beyond end of cell and a faint curved postmedial line. Hindwing rufous tinged with brown.

*Habitat*.—ASSAM, Khàsis (Badgley). *Exp.* 24 mill. Type in B. M.

*Larva*.—Slug-like with short stinging hairs ; head retractile, usually concealed under collar when feeding, the hairs from small prominences ; gregari-

ous ; green with a blue dorsal stripe-edged by fine black lines ; two small black dots on the neck and four black spots at anal extremity ; ventral surface semi-transparent green. Food plant : *Bucklandia populnea*.

*Cocoon*.—Oval, slight, fastened to the ground and covered by a slight semi-transparent grey papery cover.

*Pupa*.—Rounded, pale brown (Badgley).

853 *b*. MIRESA PYRONOTA, n. sp. (Pl. F., f. 22).

♂. Head and thorax fiery red with a few red-brown scales mixed ; palpi dark at sides ; pectus and legs more rufous ; abdomen yellow slightly tinged with red and with rufous dorsal patch at base. Forewing rufous with a slight silvery gloss, some fiery red and yellow on basal half of inner margin ; some silver scales at upper angle of cell and a triangular silver spot just beyond lower angle ; a postmedial series of silver points on the veins, oblique below vein 7 : the terminal area with slight silvery irroration. Hindwing yellow tinged with red and with a slight silvery gloss.

*Habitat*.—CEYLON, Trincomali (Green). *Exp.* 38 mill. Type in B. M.

855 *a*. MIRESA METATHERMISTIS, n. sp. (Pl. F., f. 6).

♂. Head and tegulæ yellow, the palpi except at tips and antennæ rufous ; thorax and abdomen yellow suffused with rufous, the metathorax with deep rufous tuft of hair. Forewing bright rufous, the basal half of inner area yellowish ; an indistinct deep rufous discoidal spot with a few silvery scales on it ; postmedial line deep rufous with silvery white scales on and before it and silvery white spots on it in submedian interspace and on inner margin, oblique from vein 6 to middle of inner margin ; a slight rufous terminal line ; cilia yellowish at base deep rufous at tips. Hindwing silky rufous, the cilia yellowish at base.

*Habitat*.—BOMBAY, Kanara, Karwar (T. R. Bell). *Exp.* 30 mill.

*Larva*.—Food plant : *Blachia*.

856 *b*. MIRESA PHOCEA, n. sp. (Pl. F., f. 5).

Antennæ of male bipectinate with short branches to apex.

♂. Head, thorax and abdomen very dark brown, the hairs slightly tipped with grey ; tarsi pale below. Forewing very dark brown with a leaden grey gloss, the scaling of medial and postmedial areas except towards costa ribbed like seal-skin ; a very oblique grey line defined on inner side by blackish from middle of costa to inner margin before middle ; an elliptical blackish discoidal spot ; an obscure diffused dark subterminal line from costa to termen at vein 2, angled outwards below costa, then incurved. Hindwing dark glossy red-brown.

*Habitat*.—CEYLON, Trincomali (Green). *Exp.* 32 mill. Type in B. M.

862 *a*. PARASA METATHERMES, n. sp. (Pl. F., f. 4).

♂. Head, thorax and abdomen chocolate brown ; patches on back of head, tegulæ except at middle and sides and patagia except outer edges bright grass-green. Forewing with the basal area chocolate brown, its outer edge angled outwards at median nervure and vein 1 and with slight yellowish line ;

medial area bright green; the terminal area pale chocolate brown with darker curved line on its inner edge, slightly incurved in submedian interspace. Hindwing pale chocolate brown.

*Habitat*.—CEYLON, Ohiya (de Mowbray). *Exp.* 28 mill. Type in B. M.

Genus. EPIPYROPS.

*Epipyrops*, Westw., Proc. and Trans. Ent. Soc., 1876, pp. xxiv Type and 522..... *anamola*.

Proboscis absent; palpi extremely minute; frons smooth; eyes large antennæ bipectinate with long branches in both sexes; tibiæ without spurs. Forewing with the apex somewhat produced and acute, the termen evenly curved; vein 3 from before angle of cell; 4·5 from angle; 6·7·8·9·10·11 from cell. Hindwing with vein 3 from before angle of cell, 5 from above angle; 6 from below upper angle.

The larvæ and pupæ are covered with masses of flocculent white waxy secretion.

873a. EPIPYROPS POLIOGRAPHA, n. sp. (Pl. F., f. 12).

♀. Head, thorax and abdomen very dark olive brown mixed with grey. Forewing very dark olive brown thickly and evenly reticulated with indistinct silvery grey markings.

Hindwing uniform very dark olive brown.

*Habitat*.—CEYLON, Mankulam (Mackwood), Yatiyantota (Green). *Exp.* 16-26 mill. Type in B. M.

879a. CERATONEMA FUSCA, Swinh., A. M. N. H. (7), XV., p. 498 (1905).

Head rufous suffused with fuscous; thorax and abdomen ochreous tinged with rufous. Forewing rufous, the costal half suffused with purplish fuscous to the postmedial line; the terminal area pale ochreous tinged with rufous and irrorated with large fuscous scales; the postmedial line diffused incurved at discal fold and more strongly at submedian; cilia pale at base, dark at tips. Hindwing pale ochreous.

*Habitat*.—SIKHM; ASSAM, Khâsis. *Exp.* ♂ 22, ♀ 26 mill.

880b. CERATONEMA CAUSTIPLAGA, n. sp.

♀. Head and thorax deep chestnut-red glossed with silvery scales; abdomen pale red-brown. Forewing chestnut-brown suffused with purplish silvery scales; a bright chestnut-red patch between veins 5 and 2 with an oblique band from its inner edge to inner margin; a chestnut-red apical patch. Hindwing red-brown, the cilia greyer with a brown line near base.

*Habitat*.—ASSAM, Khâsis (Badgley). *Exp.* 28-34 mill. Type in B.M.

*Larva*.—With long spines bearing stinging hairs; pale yellow green with diagonal yellowish marks at sides; a blue-edged white dorsal line with an orange-red band on each side of it; the anterior spines and the spines on shoulders and tail pink, with two black dots between the pair on shoulders; hairs on spines black with yellow tips or yellow with black tips. Food plants: *Andromeda ovalifolia*, *Euryja japonica*, *Viburnum punctatum* and *Simlax ovalifolia*.

*Cocoon*.—On a leaf under rubbish, oval, dull purplish mottled with grey-brown, fastened to leaf by some fluffy pale brown silk.

*Pupa*.—Short, blunt at both ends, pale brown (Badgley).

881a. *ARLEOGYIA PLEOPASTA*, Hmps. n. P.Z.S., 1906, p. 492, Pl. 36, f. 22.

Forewing with veins 7, 8, 9, 10 stalked; fore and mid tibiae, the 1st joint of fore tarsi and the 1st two joints of mid and hind tarsi fringed with long scales.

♂. Head and thorax grey irrorated with dark brown, the tufts of scales on the legs black; abdomen ochreous tinged with rufous. Forewing ochreous thickly irrorated with dark brown leaving an indistinct oblique ochreous line from lower angle of cell to inner margin, an elliptical spot between basis of veins 5+4, some ochreous on costa towards apex and on termen from vein 5 to tornus; cilia fuscous with an ochreous line at base. Hindwing uniform silky brown; cilia ochreous at base, brown at tips.

*Habitat*.—SIKIM, Darjiling (Atkinson), Gantok. *Exp.* 22 mill.

888a. *ALTHIA PERALBA*, Swinh., Trans. Ent. Soc., 1904, p. 153.

♀. White; patagia at extremity, pectus and forelegs in front, abdomen at base and extremity and on ventral surface irrorated with brown and black. Forewing with the basal area irrorated with black, a slight streak of scales on extremity of median nervure and some diffused scales on apical area.

*Habitat*.—BOMBAY, Poona. *Exp.* 26 mill.

894a. *BELIPPA CYANOPASTA*, n.sp.

Hindwing with veins 6+7 strongly stalked.

♀. Head and thorax rufous with some silvery blue scales on outer edge of patagia and sides of thorax; abdomen rufous with some silvery blue scales. Forewing rufous, the basal area and terminal half except towards costa irrorated with dark brown and silvery blue scales; numerous waved striae of raised scales; traces of diffused rufous antemedial and medial bands; a diffused blackish streak from upper angle of cell to the rufous subterminal band which is oblique towards costa, incurved at discal fold, then with some blackish triangular marks before it. Hindwing dark reddish brown.

*Habitat*.—BURMA, Bhamo (Fea). *Exp.* 34 mill.

#### LASICAMPIDAE.

910 a. *METANASTRIA VITTA*, Moore, Lep. E.L.C. p. 424, Pl. xii. a, f. 4 (1859.)

Bright brick-red with slight greyish irroration; abdomen rather more ochreous. Forewing with indistinct dark antemedial line angled in submedian fold, then oblique; a small discoidal white spot defined by fuscous; an indistinct dark minutely waved postmedial line, angled outwards at vein 7 and oblique below vein 2; a minutely dentate subterminal line angled outwards at veins 4+3; termen tinged with fuscous. Hindwing with traces of diffused maculate postmedial band angled outwards between veins 4+3.

*Habitat*.—BENGAL, Calcutta; BORNEO, Kuching; JAVA. *Exp.* ♂ 40, ♀ 54 mill.

## Genus CHIROSTOGASTRIA.

Type

*Chrostogastria*, Hübn. Verz., p. 189 (1827)..... *pruni*.

Proboscis absent; palpi porrect to well beyond frons and thickly clothed with hair; frons with tuft of hair; eyes small, hairy; antennæ of male pectinate to apex with long decumbent branches, the basal joint with tuft of hair, of female with shorter branches; head, thorax and abdomen clothed with woolly hair, the tibiæ and tarsi fringed with long hair on outer side, the tibiæ with terminal pairs of small spurs. Forewing with the costa highly arched towards apex, the termen rather oblique and strongly crenulate; vein 3 from long before angle of cell; 4.5 from angle; 6.7 stalked; 8 from angle, 9-10 stalked; 11 approximated to 12 towards costa. Hindwing with the costa strongly lobed at base; the termen crenulate; vein 3 from close to angle of cell; 4.5 hardly stalked; 7 from long before angle of cell, bent upwards and touching 8 at a point.

922a. CHIROSTOGASTRIA PRUNI, Linn. Syst. Nat., p. 498 (1758); Esp. Schmett., III, p. 72, Pl. 10, Hübn. Eur. Schmett. Bomb., f. 186. Godt. Lép. Fr., IV, p. 87, Pl. 8, ff. 3.4. Staud. Cat. Lép. pal., p. 124.

*Odonestis prunoides*, Staud. Cat. Lep. pal., p. 69 (1872).

Orange yellow suffused with red; antennæ with the branches brown. Forewing irrorated and suffused with red; an indistinct antemedial line, oblique below the cell; a rounded silvery white discoidal spot; a prominent very obliquely curved postmedial line, approximated at inner margin to the antemedial line; a rather diffused red subterminal line, slightly dentate at the veins, incurved between veins 6 and 4. Hindwing with traces of irregular postmedial line, the area beyond it usually yellower.

*Habitat.*—EUROPE; ASIA MINOR, Bithynia; E. SIBERIA, Ussuri; JAPAN; W. CHINA; ASSAM, Khâsis, Jaintia Hills. *Exp.* 46—76 mill.

*Larva.*—Kirby, Butt. and Moths, Eur., p. 137.

Bluish grey spotted with whitish and with the lines yellow, the 3rd somite with red dorsal band; the 12th somite with dorsal hump defined by reddish; stigmata ringed with black. Food plants various forest and fruit trees 9.5.

929. ALAMPRA FERRUGINEA, insert (syn.) *Taragama indicus*, Conte. Rapp.

Lab. Ét. Soie XIII, p. 24, Pl. vi., f. 1 (1909).

The hindwing of male has the termen squarely truncate, the figure represents a female, not a male.

951a. GASTROPACHA KHASIANA, Swinh., A.M.N.H. (7). XV., p. 499 (1905).

♂. Head and thorax rufous mixed with whitish; abdomen ochreous white tinged with rufous. Forewing rufous suffused with whitish, especially on terminal area which is tinged with ochreous, the lines formed of small rufous lunulate marks; two antemedial lines; a black discoidal point; two postmedial lines, bent inwards and diverging towards costa, then oblique, with another line beyond them from costa to vein 6; a subterminal line bent inwards to costa



with an oblique striga beyond it from costa to vein 8; a terminal series of ill-defined lunules with the cilia beyond them white. Hindwing with the termen angled at vein 6 and 2, rufous, the terminal half tinged with greyish ochreous; a medial line incurved at discal fold; two less prominent minutely waved postmedial lines incurved at discal fold; cilia white in the excisions; the underside suffused with whitish.

*Habitat.*—ASSAM, Khásis. *Exp.* 50 mill.

LYMANTRIADÆ.

979*b*. *LÆLIA FULVATA*, n. sp. (Plate F., f. 29).

♀. Orange fulvous. Forewing with subterminal series of prominent black spots, the spot above vein 6 slightly displaced outwards and those below veins 3 and 2 bent inwards parallel to inner margin. Hindwing paler.

*Habitat.*—CEYLON, Galboda (Mackwood). *Exp.* 52 mill. Type in B. M.

1611*a*. *DASYCHIRA DUDGEONI*, Swinh., A. M. N. H. (7), XIX, p. 203 (1907).

♂. Head and thorax brown mixed with grey, the metathorax with patch of black scales with a metallic gloss; tarsi whitish fringed with dark brown hair; abdomen pale, dorsally suffused with brown. Forewing dull brown, the inner margin and a patch beyond postmedial line in submedian interspace dull ochreous; sub-basal line black defined by ochreous on outerside, slightly waved, from costa to vein 1; antemedial line indistinctly double, the inner line black in submedian interspace, waved, with some black irroration before it, filled in with greenish white and with greenish irroration beyond it except on inner area; a slight whitish lunule at lower angle of cell; postmedial line blackish, oblique from costa to vein 7, then dentate, very oblique and defined by ochreous lunules on inner side below vein 3; a series of minute indistinct ochreous dentate marks from costa to vein 3, bent inwards to costa, before the subterminal series of slight dark lunules on faint ochreous spots. Hindwing uniform dull grey-brown; the underside ochreous whitish suffused with brown, an indistinct curved postmedial line from costa to vein 5 and traces of a diffused subterminal line.

*Habitat.*—SIKHIM. *Exp.* 40 mill.

1611*b*. *DASYCHIRA CYMATA*, Swinh., A. M. N. H. (7), XIX, p. 204 (1907).

♂. Head and thorax reddish brown mixed with grey; forelegs blackish brown, the pectus behind and mid and hind legs paler; abdomen reddish brown. Forewing reddish brown suffused with fuscous and irrorated with black and some grey; a small sub-basal whitish spot defined by black scales below the cell; antemedial line rather indistinct, blackish, highly waved, with whitish points before and beyond it in submedian fold; a pale discoidal lunule defined by black; postmedial line blackish, excurved from just below costa to vein 4, then waved; traces of a pale waved subterminal line crossed by short black streaks in the interspaces between veins 8 and 5. Hindwing uniform pale greyish brown; the underside brownish white with traces of a diffused curved brownish postmedial band.

*Habitat.*—SIKHM. *Exp.* 40 mill.

1036a. LYMANTRIA POSTFUSCA, Swinh., A. M. N. H. (7), XVII, p. 546 (1906).

♂. Head and thorax white; palpi and antennæ black; tegulæ and patagia edged with black; pectus yellow and black; legs black with some white spots; abdomen yellow with dorsal and sublateral series of black spots, the anal tuft black. Forewing white with subbasal black band from costa to submedian fold, angle outwards in cell, a point beyond it above vein 1 and oblique striga above inner margin; a waved antemedial line expanding into a spot on costa, excurved at median nervure, then incurved; a small spot in middle of cell and discoidal spot; two dentate postmedial lines, bent outwards below costa, incurved at discal fold and below vein 5; a dentate subterminal line; a terminal series of black lunules. Hindwing whitish suffused with fuscous, leaving a whitish postmedial patch between veins 4 and 2 and a streak in submedian fold; a lunulate white terminal band from below apex to vein 2 with black points on termen.

♀. Forewing with the subbasal marks above and below vein 2 absent, the antemedial and two postmedial lines conjoined by two streaks below cell and a patch on inner margin. Hindwing whitish, the basal area tinged with yellow; a broad terminal blackish band with sinuous inner edge and some white spots on termen.

*Habitat.*—CEYLON, Kandy. *Exp.* ♂ 48, ♀ 64 m'l.

1098a. EUPROCTIS XANTHOCEPS, n. sp. (Plate F., f. 31).

♂. Head and legs pale yellow; antennæ whitish with rufous branches; thorax and abdomen red-brown with a greyish tinge. Forewing uniform red-brown, the cilia pale at tips. Hindwing fuscous brown, the cilia pale at tips. Underside of forewing with the costa yellowish.

*Habitat.*—CEYLON, Haldamulla (Mackwood). *Exp.* 24 mill. Type in B. M.

1105a. EUPROCTIS DIPLAGA, n. sp.

♂. Head, thorax and abdomen chocolate brown mixed with yellowish; the pectus, legs and ventral surface of abdomen yellow. Forewing yellowish, almost wholly suffused with chocolate brown; a large quadrate antemedial deep chocolate patch defined by yellowish white from cell to vein 1 and followed by the curved brown antemedial line; a brown postmedial line excurved from costa to vein 6, then dentate and oblique to submedian fold; an elliptical deep chocolate patch from vein 7 to below vein 6 before the subterminal line which is whitish and excurved round its outer edge, then indistinct, brown, waved, oblique; a slight yellowish terminal line with small brown spots before it from apex to vein 4. Hindwing dark chocolate brown with the base and costa to beyond middle orange-yellow; cilia yellow at tips; the underside orange-yellow with the terminal area suffused with chocolate brown.

*Habitat.*—ASSAM, Khásis (Badgley). *Exp.* 24 mill. Type in B. M.

*Eggs.*—Spheroidal; smooth, shining pale dull green; laid in lines with dark dull greenish-grey hair.

*Larva.*—Solitary; cylindrical; pubescent with a few long grey hairs; black

with five yellow rings; collar red; two red tubercles near tail; ventral surface dark olive-grey; head black, small, retractile. Food plant: *Schima Wallichii*.

*Cocoon*.—Oval, silken, strong, grey, clustered together in a shallow hollow of bark of tree stem.

*Pupa*.—Entire, naked, dark brown, with a spike at tail (Badgley).

1116a. LEUCOMA THYRIDOPTERA, n. sp. (Plate F., f. 3).

♀. White. Forewing hyaline except marginal areas; the costal and inner areas slightly tinged with fuscous; four irregular oblique lines of raised scales on antemedial area; a discoidal patch of white scales with some striae beyond it; the terminal band with its inner edge angled inwards above veins 5·2·1, with striae of raised scales on it and ill-defined fuscous subterminal line. Hindwing hyaline except inner and terminal areas; an antemedial patch of scales from middle of cell to inner area; a discoidal lunule; the terminal band with its inner edge angled inwards above veins 5 and 2 and with a diffused fuscous subterminal line on it.

*Habitat*.—CEYLON, Habarama (Mackwood). *Exp.* 48 mill. Type in B. M.

1125. CISPIA PUNCTIFASCIA.

In the typical form from N. India the orange band of forewing extends to the costa and inner margin.

Subsp. 1. Forewing with the orange band extending from upper angle of cell to vein 1 only.

*Habitat*.—CEYLON, low country, N. Central Province (Pole), Anaradpura, Kandy (Green).

Subsp. 2. Larger and darker; abdomen with the dorsal and lateral black spots much more developed; hindwing with the curved medial band much more developed, the terminal area tinged with rufous, leaving yellow streaks on the veins.

*Habitat*.—CEYLON, Hill country, Maskeliya (Pole, de Mowbray). *Exp.* ♂ 62. ♀ 76 mill

#### ARCTIADÆ.

#### NOLINÆ.

1529a. CELAMA LEUCOSOPULA, Hmps., A. M. N. H. (7), XIX, p. 227 (1907). (Plate G., f. 2.)

Head, thorax and abdomen white, slightly tinged with pale rufous; anal tuft pure white. Forewing white, tinged in parts with pale brown; antemedial line black, strong, angled outwards in cell, then oblique, with brownish suffusion before it; medial and postmedial oblique elliptical patches from costa; postmedial line very ill-defined, bent outwards below costa, then oblique; traces of a sinuous subterminal line. Hindwing white, slightly tinged with brown and with faint discoidal spot.

*Habitat*.—CEYLON, Ambalangoda, Peradeniya, Matale, Pattalam, Hambantota. *Exp.* 12 mill.

1530d. CELAMA MESOTHERMA, Hmps., A. M. N. H. (8), IV, p. 349 (1909). (Plate G., f. 3).

Head, thorax and abdomen white, tinged with rufous ; palpi with the scales fringing the joints tipped with black ; tibiæ and tarsi ringed with blackish. Forewing white, irrorated with rufous and some fuscous ; a subbasal black point on costa ; antemedial line brown defined on inner side by white, angled outward below costa, then oblique ; medial area suffused with rufous, the tufts of scales at middle and upper angle of cell dark with oblique elliptical brownish stigmata above them from costa ; postmedial line blackish and somewhat punctiform, defined on outer side by white, slightly bent outwards below costa, oblique to vein 4, then incurved and again excurved above inner margin ; subterminal line white, defined on inner side by blackish scales with rufous suffusion before them, angled outwards at vein 7, excurved at middle, and ending at tornus ; a punctiform dark terminal line ; cilia white, mixed with some rufous and fuscous. Hindwing white, tinged with ochreous brown, especially towards termen ; cilia white, faintly tinged with brown ; the underside white, the costal area irrorated with brown.

*Habitat.*—CEYLON, Rambakkhana, Colombo ; BORNEO, Sarawak, Sandakan. *Exp.* 14 mill.

1530e. CELAMA RUFIMIXTA, Hmps., A. M. N. H. (8), IV, p. 350 (1969). (Plate G., f.4).

Head and thorax white ; palpi rufous ; antennæ tinged with rufous ; thorax with some rufous behind tegulæ ; tarsi rufous ringed with white ; abdomen white, tinged with rufous. Forewing white, with some blackish irroration on basal area and before postmedial line ; antemedial, medial and postmedial rufous patches on costa ; the terminal area suffused with rufous except at apex ; antemedial line white, defined on inner side by rufous and on outer by black from cell to inner margin, excurved in submedian interspace ; large tufts of rufous and white scales in middle and end of cell ; an indistinct oblique waved line from lower angle of cell to inner margin ; postmedial line white, defined on inner side by brown, slightly bent outwards below costa and incurved below vein 4, subterminal line white, slightly defined on inner side by black scales, excurved below costa, at middle and above inner margin. Hindwing white, the terminal area tinged with brown ; the underside with the costal area irrorated with brown, a dark discoidal striga.

*Habitat.*—CEYLON, Yatiyantota, Matale, Wattegama. *Exp.* 18 mill.

1530f. CELAMA DENTILINEA, Hmps., A. M. N. H. (8), IV, p. 350 (1909). (Plate G., f.5).

♀. Head, thorax and abdomen white, tinged with ochreous brown ; fore tibiæ and the tarsi fuscous brown ringed with ochreous white. Forewing white, tinged with ochreous brown and slightly irrorated with fuscous ; antemedial line blackish defined on inner side by white, curved, angled outwards in submedian fold ; the tufts of scales at middle and upper angle of cell dark, with oblique elliptical brownish stigmata above them from costa ; a waved dark line from lower angle of cell to inner margin ; postmedial line

blackish, punctiform, oblique from costa to vein 6, then inwardly oblique; terminal area suffused with ochreous brown, the subterminal line white; strongly and evenly dentate; a brown terminal line; cilia white, tinged with ochreous brown. Hindwing white, the costal area tinged with ochreous brown.

*Habitat*.—CEYLON. *Exp.* 18 mill.

1534. RASELIA NEGRITA, insert (syn.) 1407a. *Galleridia fuscizonea*.

1539b. RASELIA PALLIDICEPS, Hmps., A. M. N. H. (7), XIX, p. 229 (1907). (Plate G., f. 6).

♂. Head and tegulae ochreous white; palpi and lower part of frons black-brown; thorax grey mixed with fuscous; abdomen grey. Forewing grey thickly irrorated with fuscous brown, the terminal half slightly paler; a dark slightly curved medial line; a black discoidal bar; the postmedial line conjoined to its upper and lower extremities and excurved beyond cell, an ill-defined line from costa beyond it, joining the subterminal line at vein 4 and with a dark striga from costa between them; the subterminal line ill-defined, slightly angled outwards at vein 7 and inwards at vein 2. Hindwing grey thickly irrorated with fuscous; cilia with a fine pale line at base.

*Habitat*.—CEYLON. *Exp.* 14 mill.

1543b. ZIA ECTROCTA, Hmps., A. M. N. H. (7), XIX, p. 229 (1907). (Plate G. f. 7).

♂. Head and thorax white; legs blackish, the tarsi ringed with white; abdomen white, tinged with fuscous. Forewing pure white; a small black spot on costa near base; a medial triangular black patch from costa to origin of vein 2, its outer edge excised in cell; two small discoidal tufts of raised scales with a few dark scales round them; postmedial line black, with small tufts of raised metallic scales on it, oblique and obsolescent from costa to vein 6, slightly incurved at discal fold and strongly below vein 4, the area beyond it rufous except at apex; subterminal line represented by a dark point on costa, then on the rufous area white defined on inner side by black from below apex to vein 3, excurved below vein 7 and at middle, and below vein 2 angled inwards to near postmedial line; cilia rufous, intersected with white. Hindwing white, the terminal area slightly tinged with brown from apex to vein 3.

*ab.* 1. Forewing with the postmedial line more angled inwards below vein 4 and with large black patches beyond it on inner area and at middle, the latter connected with the termen below apex by an oblique black fascia.

*Habitat*.—CEYLON, Haputale, Maskeliya. *Exp.* 20-24 mill.

#### LITHOSIANÆ.

1340a. ILEMA ATRIFRONS, Hmps., A. M. N. H. (7), XIX, p. 231 (1907) (Plate G., f. 8).

♂. Head, tegulae, patagia, pectus and legs fulvous yellow; palpi, frons and forelegs in front fuscous; dorsum of thorax and base of abdomen grey

white, the rest of abdomen yellow. Forewing yellow with a whitish suffusion. Hindwing whitish yellow.

*Habitat.*—NICOBARS. *Exp.* 26 mill.

1386c. HALONE FLAVINIGRA, Hmps., A. M. N. H. (7), XIX., p. 232 (1907). (Plate G., f. 9.)

♂. Head, thorax and abdomen fuscous, the vertex of head, base of shaft of antennæ, and tegulæ yellow. Forewing orange yellow; a black patch at base with irregular oblique outer edge; a postmedial black band angled inwards below cell and with rather dentate edges; some diffused fuscous before termen. Hindwing pale fuscous.

*Habitat.*—S. INDIA, Palni Hills, 6,000'. *Exp.* 20 mill.

1402b. EUGOA CRASSA, Wlk., Journ. Linn. Soc. Zool., VI, p. 114 (1862); Hmps., Cat. Lep. Phal. B. M., II, p. 547, Plate 34, f. 28.

*Tospitis indeclaratana*, Wlk., XXVIII, 427 (1863).

*Tospitis inconspicua*, Wlk., XXVIII, 430 (1863).

♂. Head and tegulæ pale yellow; palpi and lower part of frons blackish; thorax brown; abdomen yellowish. Forewing yellowish, thickly irrorated and suffused with reddish brown; a rather darker patch at base of costa; a minute black point at lower angle of cell; faint traces of an oblique band from costa near apex. Hindwing pale yellow.

♀. Hindwing pale brown, the cilia pale yellow.

*ab.* 1. *inconspicua*. Frons blackish; forewing with the patch on base of costa more prominent; the oblique postmedial band more prominent.

*Habitat*—ASSAM, Khâsis; BORNEO, Sarawak. *Exp.* 20-22 mill.

1424b. MILTOCHRISTA OCELLATA, Hmps., A. M. N. H. (7), XIX, p. 234 (1907). (Plate F., f. 32.)

♀. Head and thorax orange-yellow; patagia and prothorax with black spots, tibiæ banded with black, last joint of tarsi black; abdomen greyish ochreous, the ventral surface blackish. Forewing orange yellow; small black spots at base of costa and cell; fuscous spots below costa and cell and above vein 1 before the antemedial line which is interrupted at submedian fold and angled inwards above inner margin; a large annulus at end of cell; postmedial line strongly bent outwards below costa, then highly and irregularly dentate, strongly incurved below vein 4 and conjoined to antemedial line above and below submedian fold; a subterminal series of small spots on the veins. Hindwing yellow.

*Habitat.*—CEYLON, Ohiya. *Exp.* 40 mill.

1461d. ASURA PHANTASMA, Hmps., A. M. N. H. (7), XIX, p. 233 (1907). (Plate G., f. 10.)

♂. Whitish ochreous; antennæ and forelegs in front fuscous. Forewing with the base of costa black; a small black spot in base of cell; an indistinct antemedial series of spots strongly excurved in cell and less so below it, some times almost conjoined into a line; a medial line oblique from costa to subcostal nervure, then excurved, often almost obsolete; a small discoidal spot;

a postmedial series of points, sometimes almost obsolete, those on veins 6 and 4 nearer termen; one or two points on termen sometimes present. Hindwing pale ochreous, the apex sometimes faintly tinged with fuscous.

*Habitat.*—ANDAMANS. *Exp.* 18 mill.

1462a. ASURA TOXODES, Hmps., A. M. N. H. (7), XIX., p. 233 (1907). (Plate G., f. 11.)

♂ Head and thorax pale ochreous slightly mixed with fuscous; antennæ and extremities of tibiæ fuscous; abdomen ochreous white. Forewing pale ochreous, the costal edge blackish on basal and terminal areas; a black point in base of cell; some fuscous in submedian fold; a highly curved antemedial line; a medial line angled inwards in cell; postmedial line confluent at costa and inner margin with the medial line with which it forms a bow-shaped mark, very oblique from costa to vein 6 and from vein 4 to inner margin; a very irregular subterminal line, angled outwards at veins 6 and 4: a fine black terminal line. Hindwing pale semi-hyaline ochreous.

*Habitat.*—ANDAMANS, *Exp.* 24 mill.

1481a. ASURA FULVIMARGINATA, Hmps., A. M. N. H. (8), IV, p. 357 (1909). (Plate G., f. 12.)

♀. Head, tegulæ and patagia orange yellow; the vertex of head with slight dark streak; antennæ brown; thorax and abdomen pale brown, the hind tibiæ and tarsi yellowish. Forewing pale red-brown, the costal and inner margins reddish yellow. Hindwing pale semi-hyaline red-brown.

*Habitat.*—MADRAS, Horsleykonda *Exp.* 26 mill.

1485a. NEASURA TAPROBANA, Hmps., A. M. N. H. (7) XIX, p. 232 (1907). (Plate G., f. 13.)

♂. Ochreous yellow; antennæ at tips, forelegs in front and extremities of mid and hind tibiæ fuscous. Forewing with black point in base of cell; the costa fuscous to the curved diffused antemedial line; a blackish discoidal point on some fuscous suffusion; postmedial line very diffused and ill-defined, waved, emitting streaks inwards on the veins and outwards on veins 7·6·4. Hindwing, with slight fuscous suffusion below apex.

*Habitat.*—CEYLON, Maskeliya. *Exp.* 24 mill.

#### ARCTIANÆ.

1175a. DIACRISIA ALBICORNIS.

♀. Head and thorax dull brown; antennæ black; pectus, legs, except femora above, and ventral surface of abdomen brown. Forewing uniform dull brown. Hindwing brown, suffused with scarlet; a black discoidal spot; Underside brown, suffused with scarlet; forewing with slight discoidal lunule; hindwing with black discoidal spot.

*Habitat.*—CEYLON, Haldamulla (Mackwood). *Exp.* 50 mill.

#### Genus PREPARCTIA.

*Preparctia*, Hmps., Cat. Lep. Phal. B. M. III, p. 219 (1901) *Type mirifica*. Proboscis fully developed; palpi porrect, extending about the length of

head ; antennæ of female serrate ; tibiæ with the spurs moderate. Forewing with vein 3 from before angle of cell ; 4·5 from angle ; 6 from upper angle ; 7·8·9·10 stalked ; 11 from cell. Hindwing with veins 3 and 5 from close to angle of cell ; 6·7 from upper angle ; 8 from middle of cell.

1243a. *PREPARCTIA HANNYNGTONI*, n. sp. (Plate F., f. 34.).

♀. Head black ; tegulæ yellow ; thorax black with white streaks at sides and small crimson spots behind tegulæ ; coxæ crimson, the femora and base of hind tibiæ above with crimson streaks ; abdomen crimson with dorsal series of black bars, the ventral surface black with series of slight crimson bars. Forewing black ; a subbasal creamy white striga from costa and antemedial bar both connected with a streak on median nervure from base to origin of vein 2, dilated and enclosing a slight black streak below the antemedial bar and met at origin of vein 2 by a down curved streak from base in submedian interspace ; a creamy white striga from middle of costa ; a curved band from costa beyond middle to lower angle of cell where it is produced outwards to a point, the band giving off an oblique bar from its outer edge below costa ; postmedial line creamy white, excurved from costa to vein 4, then oblique and slightly sinuous ; a narrow creamy white subterminal band, excurved from costa to vein 5, slightly incurved at vein 3, and at submedian fold, forming a wedge-shaped patch connected with the postmedial line ; the cilia and the inner margin narrowly creamy white. Hindwing crimson ; an oblique black band from costa before middle to vein 1 ; a large discoidal lunule and spot above it on costa ; postmedial band black, obliquely curved from below costa where it arises, to vein 1 where it terminates in a quadrate patch connected with the medial band, with which it is also connected by a wedge-shaped patch at vein 2 ; subterminal band black, curved, from costa to submedian fold, dilated at discal fold and vein 2 ; a triangular patch above tornus ; a fine black terminal line from apex to vein 2 ; cilia yellow ; the underside with the costal area yellow.

*Habitat*.—KUMAON, Niti Pass, 10,000' (*Hannington*). *Exp.* 58 mill. Type in B. M.

1279b. *UTETHEISA PULCHELLOIDES*, Hmps., A. M. N. H. (7), XIX, p. 239 (1907). (Plate G., f. 19).

Differs from *U. pulchella* in the antennæ of male being serrate instead of ciliated and in the hindwing having a fold and tuft on inner area.

It varies much in the same way as *U. pulchella* but never seems to lose the black spots of forewing which usually has the ground colour rather white ; in specimens from the New Hebrides and Solomons the black terminal band on hindwing is largely developed. It appears to be confined to Oceanic and other Islands and to N. Australia.

*Habitat*.—SEYCHELLES ; CARGADOS CAREJOZ ; COETIVY ; AMIRANTES ; CHAGOS IS. ; CEYLON, Kandy, Peradenyia, Hambantota, Trincomali ; COCOS KEELING IS ; CHRISTMAS IS. ; SINGAPORE ; FORMOSA ; LOO-CHOO IS. ; NEW GUINEA ; N. AUSTRALIA ; QUEENSLAND ; SOLOMON IS. ; GILBERT IS. ; MARSHALL IS. ; ELLICE IS. *Exp.* 34-44 mill.



## NOCTUIDÆ.

## AGROTINÆ.

For *Ala* Staud. 1882 Nec. Lock. Crust. 1877 insert ANARTOMORPHA,  
Alph. Rom.

Mem. vi., p. 39 (1892) ... .. *Type potanini*.  
1669b. ANARTOMORPHA FLAVESCENS, Hmps., P. Z. S. 1906, p. 486, Plate  
36, f. 3.

♂. Head and thorax clothed with black, brown and grey scales and hair; palpi whitish banded with brown; lower part of frons whitish; fore tibiæ and tarsi with white rings; abdomen ochreous white, irrorated with fuscous. Forewing black-brown, suffused with greyish; subbasal line indistinctly double filled in with grey, angled inwards in cell and extending to vein 1; antemedial line indistinctly double filled in with grey, oblique from costa to submedian fold, then erect; claviform moderate, defined by black; orbicular and reniform with brown centres and slight whitish annuli defined by black, the former oblique elliptical, the latter angled inwards on median nervure and touching the former; an indistinct dentate whitish mark below end of cell on vein 2; postmedial line double filled in with greyish, bent outwards below costa, oblique to vein 5 where it is angled, then inwardly oblique and minutely waved; subterminal line whitish, slightly defined by black on outer side, angled outwards at vein 7 and to termen at veins 4-3, incurved at discal and submedian folds; a terminal series of slight black lunules; cilia whitish and brown with a blackish line through them. Hindwing white, strongly tinged with ochreous; the basal area suffused with fuscous; a black discoidal lunule; a terminal fuscous band, rather broad at costa, narrowing to a point at tornus; some black striæ on termen; cilia pure white, the underside ochreous white, the costal area slightly irrorated with fuscous, a slight discoidal lunule and diffused subterminal bands.

*Habitat*.—SIKHIM, Tungu. *Exp.* 28 mill.

1948a. ISOCHLORA METAPHÆA, Hmps., P. Z. S. 1906, p. 488, Plate 36, f. 2.

♂. Head and thorax emerald green; palpi and sides of frons purplish red; antennæ fulvous; pectus and legs greyish ochreous, the front of pectus and fore and mid legs in front purplish red; abdomen pale ochreous, the ventral surface suffused with purplish red, the anal tuft fulvous. Forewing emerald green, the costal edge white; cilia white at tips. Hindwing ochreous white, uniformly suffused with pale brown; cilia yellowish white. The underside of forewing pale purplish red, the termen greenish; hindwing brownish white, the costal area tinged with purplish red.

*Habitat*.—SIKHIM. *Exp.* 42 mill.

1633b. EUXOA CONFUSA, Alph. Hor. Ent. Soc., Ross., XVII., p. 61, Plate 2, f. 47 (1882); Staud. Cat. Lep. Pal., p. 136.

Head, thorax and abdomen grey, mixed with brown and fuscous; palpi blackish at sides; tarsi blackish with grey rings. Forewing grey, suffused in

part with brown and irrorated with fuscous; sub-basal line represented by double black stræ from costa and cell; antemedial line double, oblique, slightly waved, and angled inwards on median nervure; claviform slightly defined by black scales; orbicular and reniform with white annuli defined by black, the former round; postmedial line indistinctly double, slightly bent outwards below costa, then minutely waved, incurved below vein 4, some grey points beyond it on costa; subterminal line indistinct, whitish, defined on inner side by a blackish bar from costa and blackish dentate marks at middle, slightly angled outwards at vein 7; a terminal series of black points; cilia grey with a fuscous line at base. Hindwing grey, uniformly tinged with fuscous brown; cilia white; the underside white, slightly irrorated with brown, a small discoidal spot and indistinct curved postmedial line.

*Habitat.*—W. TURKISTAN; E. TURKISTAN; MONGOLIA; SIKHIM. *Exp.* 36 mill.

1627*b*. EPISILIA CLAVATA, Hmps., A. M. N. H. (7), XIX, p. 244 (1907). (Plate G., f. 20).

Antennæ of male bipectinate with moderate branches; the apical part serrate.

♂. Head, thorax, and abdomen dark reddish brown mixed with grey; tarsi with pale rings. Forewing grey tinged with red-brown, the medial area red-brown except towards costa and inner margin; sub-basal line represented by a black striga from costa; a strong sinuous black streak below base of cell with yellow streak above it to the claviform, which has a yellowish annulus defined by black and intersects the oblique sinuous antemedial line; orbicular and reniform grey with brownish centres and defined by black, the former oblique elliptical, open above, the latter a narrow lunule very strongly angled on median nervure to below orbicular, some blackish in cell before and between them; postmedial line strongly bent outwards below costa, then dentate, strongly incurved below vein 4; subterminal line very indistinct, greyish, slightly angled outwards at vein 7 and excurved at middle, the veins beyond it with slight dark streaks; a terminal series of slight brown lunules; cilia with fine brown line near base. Hindwing grey suffused and irrorated with brown, a dark terminal line: the underside with dark discoidal lunule and diffused curved postmedial line.

*Habitat.*—PUNJAB, Kulu. *Exp.* 30 mill.

1634*a*. EPISILIA ARENACEA, Hmps., A. M. N. H. (7), XIX, p. 245 (1907). (Plate G., f. 21).

Antennæ of male serrate and fasciculate.

♂. Head and thorax pale brownish ochreous, tarsi fuscous with pale rings; abdomen pale ochreous, dorsally irrorated with fuscous. Forewing pale brownish ochreous, slightly irrorated with fuscous; a double waved sub-basal line from costa to submedian fold; antemedial line indistinctly double, oblique, strongly waved, interrupted; orbicular and reniform with slight yellowish annuli incompletely defined by fuscous, the former round, the latter large; postmedial line double at costa, then indistinct, t outward below costa, then dentate and

produced to a series of black points on the veins, oblique below vein 4, some pale points beyond it on costa; subterminal line ochreous white, slightly defined by fuscous on inner side at costa, then by slight dentate marks, angled outwards at vein 7 and slightly excurved at middle; a terminal series of black points. Hindwing whitish suffused with pale brown; cilia yellowish white; the underside white, the costal area tinged with ochreous, a small discoidal spot and punctiform postmedial line.

*Habitat.*—BELOOCHISTAN, Quetta. *Exp.* 46 mill.

1632a. LYCOPHOTIA POLIOCHROA, Hmps., P. Z. S., 1906, p. 489, Plate 36, ff. 16-17.

Antennæ of male strongly serrate and fasciculate.

♂. Head and thorax grey-white mixed with some brown and fuscous; abdomen ochreous white. Forewing grey and white tinged with ochreous and slightly irrorated with brown; sub-basal line represented by black striæ from costa and cell; antemedial line single, black defined by whitish on inner side, interrupted at the veins, erect from costa to vein 1, and angled outwards above inner margin; claviform moderate, defined by black; orbicular and reniform defined by rather diffused black, with its inner edge produced inwards as a streak to antemedial line; traces of a diffused medial line touching orbicular and claviform; postmedial line single, black slightly defined by whitish on outer side, bent outwards below costa, then dentate and produced to short streaks on the veins, confluent with outer edge of reniform, oblique below vein 4; faint traces of a whitish subterminal line slightly defined by fuscous on inner side, excurved at vein 7 and middle; a terminal series of slight black lunules; cilia ochreous white with two slight dark lines through them. Hindwing white tinged with pale brown, the cilia pure white; the underside white with slight discoidal spot and indistinct postmedial line from costa to vein 4.

♀. Wing aborted, small, the forewing elongate, narrow, the termen, rounded, the hindwing triangular; forewing with the lines browner, the antemedial line excurved below cell and above inner margin; claviform absent; orbicular reduced to a point, the reniform a slight lunule well separated from postmedial line; the subterminal line more distinct and dentate. Hindwing whiter.

*Habitat.*—TIBET, Kamba Jong; SIKHIM, Teesta Valley, Lhanak Valley. *Exp.* ♂ 36, ♀ 12 mill.

1632b. LYCOPHOTIA POLIADES, Hmps., A. M. N. H. (7), XIX., p. 248 (1907). (Plate G., f. 22).

Antennæ of male ciliated; pro- and meta-thorax with spreading crests.

Head and thorax white with a few fuscous hairs; tarsi banded with black; abdomen white with tufts of long ochreous hairs from lateral stigmata. Forewing grey-white slightly tinged with pale rufous in parts and irrorated with fuscous, the veins with dark streaks; a slight black streak below base of cell; sub-basal line represented by black striæ from costa and cell; antemedial line represented by a black point on costa; claviform defined by a few black scales; orbicular

represented by a short black streak defined by white, the reniform by an undefined white lunule with fuscous spot at lower angle of cell; medial and postmedial black points on costa with some slight white points beyond them; subterminal line indistinct, whitish defined on inner side by slight dentate rufous marks, angled outward at vein 7 and inwards at discal fold; a terminal series of slight black lunules. Hindwing pure white.

*Habitat*.—BELOOCHISTAN, Quetta. *Exp.* 36 mill.

## Genus METALEPSIS.

*Type*

*Metalepsis*, Grote, Check. List. Noct., p. 25 (1875) ..... *cornuta*.

*Spinipalpa*, Alph. Hor. Ent. Soc., Ross., xxvi, p. 444 (1892) ..... *maculata*.

Proboscis well developed; palpi oblique, fringed with long hair in front and with some spinous hair mixed; frons smooth; eyes rounded, strongly ciliated; antennæ of male typically pectinated with rather short branches; frons and vertex of head with tufts of hair; thorax clothed with hair; tegulæ forming a dorsal ridge; pro- and meta-thorax with crests; tibiæ strongly spined; abdomen fringed with long hair at sides. Forewing rather narrow, the apex produced; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 shortly stalked; 8 anastomosing with the cell near base only.

Sect. (*Spinipalpa*) Antennæ of male ciliated.

1624a. METALEPSIS MACULATA.

*Spinipalpa maculata*, Alph. Hor. Ent. Soc., Ross., XXVI, p. 445 (1892); id. Bom. Mem., IX, p. 12, plate 1, f. 1; Staud. Cat. Lep. Pal. 154.

*Metalepsis aletes*, Hmps., P. Z. S., 1906, p. 488, plate 36, f. 6.

♂. Head and thorax pale rufous with a few black hairs; patagia with a white fascia edged on each side by black; pectus, legs and abdomen brownish grey, the anal tuft ochreous. Forewing pale rufous, the veins streaked with white and defined on each side by grey; a slight black streak below base of costa; a black streak below base of cell and another above basal half of inner margin; two black streaks in cell, the upper interrupted beyond middle, the lower not reaching lower angle; an obliquely curved postmedial series of wedge-shaped black streaks in the interspaces from above veins 7 to above 1, the streak above vein 5 displaced inwards and the streak above vein 1 longer; a terminal series of wedge-shaped black streaks in the interspaces. Hindwing pale brownish grey.

*Habitat*.—TIBET; SIKHIM. *Exp.* 30 mill.

## Genus UFEUS.

*Type*

*Ufeus*, Grote, Bull. Buff. Soc. Nat. Sci., 1, p. 101 (1873) ..... *satyrica*

Proboscis fully developed, palpi short, porrect, clothed with long rough hair; frons smooth; eyes large, overhung by cilia; antennæ of male ciliated;

head and thorax clothed with rough hair; mid and hind tibiæ spined; abdomen dorsally flattened, the anal tuft large. Forewing rather narrow, the apex rounded; veins 3 and 5 from near angle of cell; 6 from upper angle or from areole; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell, 5 obsolescent from middle of discocellulars; 6·7 from upper angle or shortly stalked.

1654a. UFEUS CARNEA, Hmps., A. M. N. H. (7), XIX, p. 249 (1907). (Plate G., f. 23.)

♀. Head and thorax pale flesh colour mixed with brown; abdomen pale grey-brown. Forewing pale flesh pink slightly irrorated with fuscous, the medial area (except towards costa) and a patch on costa beyond postmedial line suffused with fuscous; sub-basal line represented by double striæ from costa and cell; antemedial line rather indistinct, wavy, incurved to costa and angled inwards on vein 1; claviform minute, defined by blackish; orbicular and reniform pale pinkish defined by fuscous, the former rather oblique elliptical, the latter with some brownish in centre and angled inwards on median nervure; traces of a wavy medial line; postmedial line indistinct, bent outwards below costa, then minutely wavy, incurved below vein 4, some pale points beyond it on costa; a subterminal series of small dentate black marks, angled outwards at vein 7, then oblique; a terminal series of minute dark points; a fine pale line at base of cilia. Hindwing ochreous suffused with brown; the underside whitish tinged with flesh colour and irrorated with brown, a small discoidal spot and indistinct sinuous postmedial line.

*Habitat*.—KASHMIR, Narkundah, *Exp.* 44 mill.

Genus ANYTUS.

*Type*

*Anytus*, Grote, Bull. Buff. Soc. Nat. Sci., 1, p. 144 (1873).....*privata*  
*Fishia*, Grote, Can. Ent. IX., p. 21 (1877).....*enthea*

Proboscis fully developed; palpi upturned, reaching vertex of head, the 2nd joint fringed with hair in front; frons smooth, rounded; eyes large, overhung by long cilia; antennæ of male typically ciliated; head and thorax clothed with hair and scales, the pro-thorax with spreading crest, the meta-thorax with ridge-like crest; tibiæ fringed with hair, the mid and hind tibiæ spined; abdomen with slight dorsal crests and rough hair towards base. Forewing with the apex rectangular, the termen crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle or shortly stalked; 8 anastomosing with the cell near base only.

1654b. ANYTUS LEUCOCYMA, Hmps., A. M. N. H. (7), XIX, p. 250 (1907.) (Plate G., f. 24.)

♀. Head and thorax red-brown mixed with fuscous; frons with lateral black bars; tegulæ with slight medial black line; abdomen grey-brown. Forewing red-brown irrorated with grey and black on basal half, the veins streaked with

black ; a sinuous black streak below base of cell ; subbasal line absent ; ante-medial line represented by two black striæ from costa, then very indistinct, strongly dentate, oblique ; claviform narrow, defined by black and with blackish streak from it to postmedial line ; orbicular defined by black, oblique wedge-shaped ; reniform indistinctly defined by black and with slight whitish lunule on its outer edge, its lower extremity produced ; postmedial line double at costa, bent outwards below costa, then dentate and produced to streaks on the veins, oblique to vein 5, then inwardly oblique and angled inwards in submedian fold, some white points beyond it on costa ; subterminal line white, waved, angled outwards at vein 7 and to termen at veins 4·3, with black streaks beyond it in the interspaces ; a fine waved black terminal line ; cilia greyish and fuscous intersected with white. Hindwing whitish tinged with brown, the veins and terminal area suffused with brown ; traces of a waved white subterminal line ; cilia white with a slight dark line through them ; the underside white irrorated with fuscous, a discoidal spot, slight waved post-medial line and traces of subterminal line.

*Habitat*.—KASHMIR, Nubra. *Exp.* 50 mill.

(*To be continued.*)